SAMSUNG Electronics

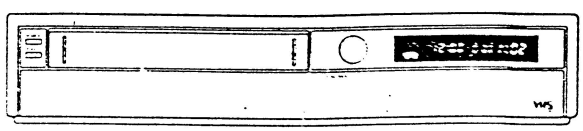
VHS HQ PAL

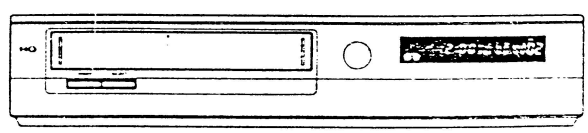
SERVICE MANUAL

MODEL: VX-1560

SVM-P10-002-1E
68139 - 102 - 102

VIDEO CASSETTE RECORDER





SPECIFICATION

Format :	VHS PAL standard
Recording System :	Double Azimuth 4 Rotary Heads Luminance : FM azimuth recording Colour : Down converted subcarrier phase shifted direct recording
Television System :	PAL colour and B/W signal
Tape Width :	12.65 mm (1/2 inch)
Tape Speed :	SP ; 23.39 mm/sec LP ; 11.67 mm/sec
Record/Playback Time :	SP ; 4 hours with E-240 type LP ; 8 hours with E-240 type
FF/REW Time :	Less than 6 min. with E-120
Heads :	Video ; Double Azimuth 4 Rotary Heads Audio/Control ; 1 stationary head Erase ; 1 full track erase

VIDEO

Input :	0.5 to 2.0 Vp-p ; 75 ohm unbalanced
Output :	1.0 Vp-p ; 75 ohm unbalanced
Signal-to-Noise Ratio :	Better than 43 dB (SP) Better than 40 dB (LP)
Horizontal Resolution:	More than 240 Lines (SP) More than 220 Lines (LP)

AUDIO

Input :	Line ; -8 dBm, 50K ohm unbalanced
Output :	Line ; -4 dBm, 1K ohm unbalanced
Wow-Flutter :	0.4% Max (SP) 0.8% Max (LP)
Frequency Response :	100 Hz - 8 KHz (SP) 100 Hz - 5 KHz (LP)
Receiving Channel :	VX : VHF LOW, VHF HIGH, UHF VI : UHF (Band IV/V) : CH 21 - 69

Power Requirement :	220/240V AC, 50Hz
Power Consumption :	Approx. 26 watts
OperatingTemperature :	41 °F - 104 °F (5 °C - 40 °C)
Operating Humidity :	10% - 75%
Weight :	6.2 kg
Dimensions :	420 (W) x 86 (H) x 315 (D)mm

CONTENTS

1. GENERAL DESCRIPTION

1-1. Safety Precautions 1-1
1-2. General Information 1-3
1-3. Operating Controls and Functions 1-4
1-4. Cleaning and Lubrication 1-11
1-5. Abbreviations 1-12

2. DISASSEMBLY

2-1. Instrument Disassembly 2-1
2-1-1. Top Cabinet Removal 2-1
2-1-2. Bottom Cover Removal 2-1
2-1-3. Front Panel Removal 2-1
2-1-4. Main Circuit Board Removal 2-1
2-1-5. Function Switch Circuit Board Removal 2-1
2-1-6. Timer Input Key Circuit Board Removal 2-2
2-1-7. Pre-Amp Circuit Board Removal 2-2
2-1-8. Regulator Circuit Board Removal 2-2
2-2. Mechanical Disassembly 2-3
2-2-1. Housing Assembly Removal 2-5
2-2-2. PWB Sensor (S) Assembly Removal 2-5
2-2-3. PWB Sensor (E) Assembly Removal 2-6
2-2-4. Sub Assembly Removal 2-6
2-2-5. Side Arm Assembly 2-6
2-2-6. Arm Gear Removal 2-6
2-2-7. Cassette Holder Assembly Removal 2-7
2-2-8. Side Chassis (L) Assembly Removal 2-7
2-2-9. Joint Gear, Arm Gear and Eject Slide Assembly 2-7
2-2-10. Deck Assembly and Assembly of F/L Housing Assembly 2-7
2-2-11. Cylinder Assembly Removal 2-8
2-2-12. Upper Cylinder Removal 2-9
2-2-13. Lower Cylinder Removal 2-9
2-2-14. Cylinder Motor Removal 2-10
2-2-15. Cylinder Assembly Removal from Main Base 2-10
2-2-16. Loading Assembly and E/J Drive Bracket Removal 2-10
2-2-17. Brake Lever Cam Assembly Removal 2-11
2-2-18. Worm Gear Wheel, Master Cam and Eject Drive Gear Removal 2-11
2-2-19. Pinch Roller Lever Assembly Removal 2-11
2-2-20. Sector Gear Removal 2-11
2-2-21. Loading Gear L/R Removal 2-12
2-2-22. Reel Disk "R" Removal 2-12
2-2-23. Reel Disk "L" Tension Band & Tension Arm Removal 2-12
2-2-24. Sub Brake L/R and REC Lever Switch Removal 2-12
2-2-25. Main Brake L/R and Tension Lever Control Removal 2-13
2-2-26. Capstan Motor and Capstan Motor Brake Removal 2-13
2-2-27. Idler Clutch and Shift Lever Removal 2-13
2-2-28. Main Brake Slide Removal 2-13
2-2-29. PWB Reel Removal 2-14
2-2-30. Idler Sub Assembly Removal 2-14
2-2-31. Assembly LED Removal 2-14
2-2-32. Worm Gear Position (Eject Mode) 2-14
2-2-33. Pinch Roller Assembly and Master Cam Gear Assembly 2-14
2-2-34. Brake Cam Lever, Eject Driver Gear and Master Cam Gear Assembly 2-15
2-2-35. ASS'Y Loading Unit and Master Cam Gear Assembly 2-15
2-2-36. Sector Gear and Loading Gear Assembly 2-16
2-2-37. Pole Base Removal 2-16
2-2-38. Audio Control Head Assembly Removal 2-16
2-2-39. Review Arm Assembly Removal 2-17
2-2-40. Full Erase Head Removal 2-17

3. MECHANICAL ADJUSTMENT

3-1. Mechanical Adjustment Tools 3-1
3-2. Tape Transport System Adjust Flow Chart 3-2
3-3. Tape Transport System 3-3
3-3-1. Location of Tape Transport Adjustment 3-3
3-3-2. Tape Transport System Adjustment 3-4
3-4. Reel Torque 3-6
3-4-1. General Features 3-6
3-4-2. Location of Tension Pole and Back Tension Adjustment 3-7
3-4-3. Reel Torque Adjustment 3-7

4. ELECTRICAL ADJUSTMENT

4-1. Preparation 4-1
4-1-1. Requied Test Equipment 4-1
4-1-2. Alignment Tape Contents 4-2
4-2. Servo Section in Main. PCB 4-3
4-2-1. Switch Point Adjustment 4-3
4-3. LUMA/CHROMA Section in Main. PCB 4-3
4-3-1. CCD IN (CLAMP) Level Adjustment 4-3
4-3-2. FM Carrier & Deviation Adjustment 4-4
4-4. Tuner/Demodulator Section in Main. PCB 4-4
4-4-1. Trap Adjustment 4-4
4-4-2. VIF Adjustment 4-5
4-4-3. AFT Adjustment 4-5
4-4-4. RF AGC Adjustment 4-6
4-5. Audio Section in Main. PCB 4-6
4-5-1. Audio Bias Level Adjustment 4-6
4-6. LP SKEW Section 4-7
4-6-1. LP SKEW Adjustment 4-7

5. TIMING CHART/TROUBLESHOOTING GUIDES

5-1. Timing Chart 5-1
5-1-1. Play/Unload/Play 5-1
5-1-2. Eject/Unload/Eject 5-1
5-1-3. Stop/Rew 5-2
5-1-4. Play/Stop/Play 5-2
5-1-5. Play/FPS/Play 5-3
5-1-6. Play/RPS/Play 5-3
5-1-7. Play/Still 5-4

5-1-8. Stop/REC/Stop 5-4
5-1-9. Pause/REC/Pause 5-5
5-2. Troubleshooting Guide 5-6
5-2-1. Index Mark Inoperative 5-6
5-2-2. Index Search Inoperative 5-6
5-2-3. Index Erase Inoperative 5-7
5-2-4. No Power 5-7
5-2-5. Drum does not Rotate 5-8
5-2-6. Capstan does not Rotate 5-8
5-2-7. FWD Search Mode Inoperative 5-9
5-2-8. REV Search Mode Inoperative 5-9
5-2-9. Noise Picture in Play 5-10
5-2-10. Tuning Inoperative 5-10
5-2-11. RF Video Missing in EE Mode 5-11
5-2-12. Video Missing in EE Mode 5-11
5-2-13. Video Missing in Play Mode 5-12
5-2-14. Video Missing in Record Mode 5-12
5-2-15. Colour Missing in Play Mode 5-13
5-2-16. Colour Missing in Record Mode 5-13
5-2-17. RF Audio Missing in EE Mode 5-14
5-2-18. Audio Missing in EE Mode 5-14
5-2-19. Audio Missing in Play Mode 5-15
5-2-20. Audio Missing in Record Mode 5-15

6. MECHANICAL/ELECTRICAL REPLACEMENT PARTS LIST

6-1. Mechanical Parts List 6-2
6-2. Electrical Replacement Parts List 6-3

7. MECHANICAL EXPLODED VIEWS

7-1. Instrument Assembly 7-2
7-2. Transport Mechanism Assembly 7-3
7-3. Bottom Side Mechanism Assembly 7-4
7-4. Housing Assembly 7-5

8. BLOCK DIAGRAMS

8-1. Total Wiring Diagram 8-2
8-2. Drum Phase Control 8-3
8-3. Drum Speed Control 8-3
8-4. Capstan Phase Control 8-4
8-5. Capstan Speed Control 8-4
8-6. Audio Playback Process 8-5
8-7. Audio Record Process 8-5
8-8. Luminance Playback Process 8-6
8-9. Luminance Record Process 8-7
8-10. Chrominance Playback Process 8-8
8-11. Chrominance Record Process 8-9

9. CIRCUIT BOARDS

9-1. Regulator (Top Side) 9-3
Regulator (Bottom Side) 9-4
9-2. Deck Joint (Top Side) 9-5
Deck Joint (Bottom Side) 9-6
9-3. Reel Sensor (Top Side) 9-5
Reel Sensor (Bottom Side) 9-6
9-4. Loading Motor (Top Side) 9-7
Loading Motor (Bottom Side) 9-8
9-5. Cassette LED (Top Side) 9-7
Cassette LED (Bottom Side) 9-8
9-6. Start/End Sensor (Top Side) 9-9
Start/End Sensor (Bottom Side) 9-10
9-7. A/C Head (Top Side) 9-9
A/C Head (Bottom Side) 9-10
9-8. Remote Control (VX/VI-1560) (Top Side) 9-11
Remote Control (VX/VI-1560) (Bottom Side) 9-12
9-9. Remote Control (VX-1561) (Top Side) 9-11
Remote Control (VX-1561) (Bottom Side) 9-12
9-10. Sync DET (OPTION) (Top Side) 9-11
Sync DET (OPTION) (Bottom Side) 9-12
9-11. Pre-Amp (Top Side) 9-13
Pre-Amp (Bottom Side) 9-14
9-12. VPS (OPTION) (Top Side) 9-13
VPS (OPTION) (Bottom Side) 9-14
9-13. OSD (OPTION) (Top Side) 9-15
OSD (OPTION) (Bottom Side) 9-16
9-14. CAP. FG AMP (Top Side) 9-15
CAP. FG AMP (Bottom Side) 9-16
9-15. LP SKEW (Top Side) 9-17
LP SKEW (Bottom Side) 9-18
9-16. Main (Top Side) 9-19
Main (Bottom Side) 9-20
9-17. Timer (VX/VI-1560) (Top Side) 9-21
Timer (VX/VI -1560) (Bottom Side) 9-22
9-18. Timer (VX-1561) (Top Side) 9-23
Timer (VX-1561) (Bottom Side) 9-24
9-19. Function (VX/VI-1560) (Top Side) 9-25
Function (VX/VI-1560) (Bottom Side) 9-26
9-20. Function (VX-1561) (Top Side) 9-27
Function (VX-1561) (Bottom Side) 9-28
9-21. Speed SUB (OPTION) (Top Side) 9-29
Speed SUB (OPTION) (Bottom Side) 9-30

10. SCHEMATICS DIAGRAMS

10-1. Regulator 10-2
10-2. Timer (VX/VI-1560) 10-3
10-3. Timer (VX-1561) 10-3
10-4. Servo/Power/System Control 10-4
10-5. Luminance/Chrominance 10-6
10-6. Audio 10-8
10-7. Tuner (VI Model) 10-8
10-8. Tuner/VPS (VX Model) 10-9
10-9. Pre-Amp 10-10
10-10. LP SKEW 10-11
10-11. O S D (OPTION) 10-12
10-12. Deck Joint 10-13
10-13. Function (VX/VI-1560) 10-14
10-14. Function (VX-1561) 10-14
10-15. Speed SUB (OPTION) 10-15
10-16. Remote Control 10-16

11. SEMICONDUCTOR LEAD IDENTIFICATION

11-1

1. GENERAL DESCRIPTION

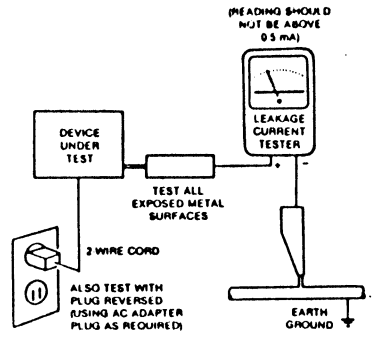
1-1. SAFETY PRECAUTIONS

1. Before returning a Video Cassette Recorder to the customer, always make a safety check of the entire instrument, including, but not limited to the following items:

a. Be sure that no built-in protective devices are defective and/or have been defeated during servicing.
(1) Protective shields are provided on this chassis to protect both the technician and the customer. Correctly replace all missing protective shields, including any removed for servicing convenience.
(2) When reassembling the instrument, be sure to put back in place all protective devices, including, but not limited to nonmetallic control knobs, insulating fish papers, adjustment and compartment covers/shields, and isolation resistor/capacitor networks.
Do not operate this instrument or permit it to be operated without all protective devices correctly installed and functioning.

b. Be sure that there are no cabinet openings through which an adult or child might be able to insert their fingers and contact a hazardous voltage. Such openings include, but are not limited to, (1) excessively wide cabinet ventilation slots, and (2) improperly fitted and/or incorrectly secured cabinet covers.

c. **Antenna Cold Check-** With the instrument AC plug removed from any AC source, connect an electrical jumper across the line and neutral wires of all input. Place the instrument AC switch in the on position. Connect one lead of an ohmmeter to the AC plug prongs tied together and touch the other ohmmeter lead in turn to each tuner antenna input exposed terminal screw and, to each of the coaxial connectors. If the measured resistance is less than 1.0 megaohm or greater than 5.2 megaohm, an abnormality exists that must be corrected before the instrument is returned to the customer.


(READING SHOULD NOT BE ABOVE 0.5 mA)
LEAKAGE CURRENT TESTER
DEVICE UNDER TEST
TEST ALL EXPOSED METAL SURFACES
3 WIRE CORD
ALSO TEST WITH PLUG REVERSED (USING AC ADAPTER PLUG AS REQUIRED)
EARTH GROUND

C Leakage Test

Repeat this test with the instrument AC switch in the off position.

d. **Leakage Current Hot Check-** With the instrument completely reassembled plug the AC line cord directly into a 220 (240V-UK) AC outlet. (Do not use an isolation transformer during this test.) Use a leakage current tester or a metering system that complies with American National Standards Institute (ANSI) *C101. 1 Leakage Current for Appliances* and Underwriters Laboratories (UL) *1410, (50.7).* With the instrument AC switch first in the on position and then in the off position, measure from a known earth ground (metal waterpipe, conduit, etc) to all exposed metal parts of the instrument (antennas, handle bracket, metal cabinet, screwheads, metallic overlays, controls shafts, etc) , especially any exposed metal parts that offer an electrical return path to the chassis.
Any current measured must not exceed 0.5milliamp.
Reverse the instrument power cord plug in the outlet and repeat test.
Reverse the instrument's AC input live and neutral leads to the AC outlet and repeat the test.

ANY MEASUREMENTS NOT WITHIN THE LIMITS SPECIFIED HEREIN INDICATE A POTENTIAL SHOCK HAZARD THAT MUST BE ELIMINATED BEFORE RETURNING THE INSTRUMENT TO THE CUSTOMER OR CONNECTING ANTENNA OR ACCESSORIES.

e. **AC Leakage Test**
Avoid shock hazards. The television instrument, accessory, or cables (s) to which this VCR is connected should have the applicable sections of the leakage resistance antenna cold check and the leakage current hot check performed.
Do not connect this VCR to a TV antenna, cable or accessory that exhibits excessive leakage currents.

2. Read and comply with all caution and safety related notes on or inside the VCR cabinet and chassis.

3. **Design Alteration Warning-** Do not alter or add to the mechanical or electrical design of this Video Cassette Recorder. Design alterations and additions, including, but not limited to circuit modifications and the addition of items such as auxiliary audio and/or video output connections, might alter the safety characteristics of this instrument and create a hazard to the user. Any design alterations or additions may void the manufacturer's warranty and may make you, the servicer responsible for personal injury or property damage resulting therefrom.

4. Observe original lead dress. Take extra care to assure correct lead dress in the following areas: a.near sharp edges, b. near thermally hot parts- be sure that leads and components do not touch thermally hot parts, c. the AC supply, and d. antenna wiring. Always inspect in all

areas for pinched, out-of-place, or frayed wiring. Do not change spacing between components, and between componets and the printed circuit board.
Check AC power cord for damage.

5. Components, parts, and /or wiring that appear to have overheated or are otherwise damaged should be replaced with components, parts, or wiring that meet original specifications. Additionally, determine the cause of overheating and/or damage and, if necessary, take corrective action to remove any potential safety hazard.

6. Product Safety Notice

Some electrical and mechanical parts have special safety related characteristics which are often not evident from visual inspection, nor can the protection they give necessarily be obtained by replacing them with components rated for higher voltage, wattage, etc. Parts that have special safety characteristics are identified by a (*) or (⚠) on schematics and parts list.
Use of a substitute replacement that does not have the same safety characteristics as the recommended replacement part might create shock, fire, and/or other hazards.
Prouducts safety is under review continuously and new instructions are issued whenever appropriate.

Electrostatically Sensitive (ES) devices

Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called *Electrostatically Sensitive (ES) Devices*. Examples of typical ES devices are integrated circuits and some field effect transistors and semiconductor " chip " components. The following techniques should be used to help reduce the incidence of component damage caused by static electricity.

1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any electrostatic charge on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging wrist strap device, which should be removed for potential shock reasons prior to appling power to the unit under test.

2. After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as aluminum foil, to prevent electrostatic charge buildup or exposure of the assembly.

3. Use only a *grounded-tip* soldering iron to solder or unsolder ES devices.

4. Use only an *anti-static* type solder removal device. Some solder removal devices not classified as " anti--static " can generate electrical charges sufficient to damage ES devices.

5. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ES devices.

6. Do not remove a replacement ES device from its protective package until immediately before you are ready to install it. (Most replacement ES devices are packaged with leads electrically shorted together by conductive foam, aluminum foil or comparable conductive material.)

7. Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.
CAUTION: Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.

8. Minimize bodily motions when handling unpackaged replacement ES devices. (Otherwise harmless motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity sufficient to damage an ES device.)

SPECIAL NOTE
All integrated circuits and many other semiconductor devices are electrostatically sensitive and therefore require the special handling techniques described under the "electrostatically sensitive (ES) devices" section of this service manual.

IMPORTANT SAFETY NOTICES
Components identified with the mark ⚠ have the special characteristics for safety when replacing any of these components. Use only the same type.

1-2. GENERAL INFORMATION

• VISS

. Index Search System
Index search system is the function of searching swiftly to previously designated points of interest on the tape using the index signal.

. Index Search
Searchs the wanted index points and plays back for five seconds at each point.

. Intro-Scan
Skip the unwanted index points and plays back the selected point.

. Marking Index Points
In either play or record mode, press " MARK" button on remote to record index point on tape. The index indicator will blink on the display.

. Erasing Index Points
In play mode, press erase button and the unit will engage in visual search forward until an index point is reached, the index point will then be erased and the " INDEX" indicator will blink, the unit will then resume the play mode.

• DA 4 HEAD (Double Azimuth 4 Head)
This lets you see very fine picture during X2, search, still or slow mode.

• VPS (Video Program System) (OPTION)
V.P.S is a new system to prevent incorrect recordings being made due to a TV programme being postponed or cancelled.

• LTC (Linear Time Counter)
This function resets the counter when front loading starts after inserting a tape. Linear time counter indicates the elapsed time of the tape running increasing in seconds.

• OSD (On Screen Display) (OPTION)
The VCR modes will be indicated on the television screen in white characters.

• Unattended (timer) Recording
The programmable timer can be preselected up to one year in advance to record up to 8 preselected programmes. (NORMAL PROGRAMME or daily programme or weekly programme). The timer turns the VCR on and off and changes channels automatically.

• One touch Recording (O. T. R)
One touch recording (OTR) lets you record up to six hours without programming the timer. It also allows you to start (or continue) recording immediately or to delay recording up to 24 hours. when the recording is finished, the VCR will turn off automatically.

• F-Advance (Frame-Advance)
Push this button to give still frame, each successive press moves the picture on frame by frame. Then you can enjoy clear and distinct still picture.

• Automatic Digital Tracking
This function automatically optimizes a clearer picture in playback mode.

• Auto Channel Memory
This function remembers the channel automatically by the NV-RAM.

• GO TO
When the LTS (Linear Time Search) function is recalled as a circuit function, the go to search function advances the tape in the FF /REW to the time position requested.

Note : On insertion of tape into machine linear time counter is set to zero irrespective of position of tape.

• Search (JET)
If you push FF/REW in play for "reverse picture search " mode or " forward picture search " mode, picture search is performed 5/9 times as fast as play speed in SP/LP mode, and push FF/REW button again for JET picture search mode, it is per formed 9/13 times as fast as play speed in SP/LP mode.

• X 2
If you push play button twice in normal playback mode, picture search is performed 2 times as fast as normal playback.

• Monitor
This button allows you to view the station that the VCR is tuned to whilst playing back a video tape. When the TV programme is displayed in this mode, the tape is still moving.

• Slow (Various Slow)
This is for adjustment of the slow speed operation in play back.

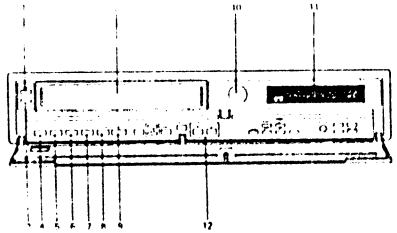
•Quick Start
This is to shorten the switching time from stop mode to play mode by having the tape deck fully loaded.

• SP/LP (Standard Play/Long Play)
This lets you record in either speed mode LP giving 8 hours from an E240 tape or SP giving 4 hours from an E 240 tape.

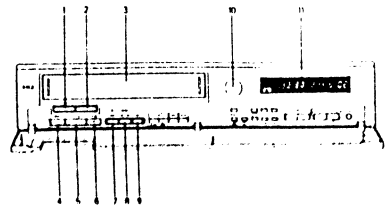
• LCD Remote Control (Liquid Crystal Display)
Alows setting of the clock and timer settings via handset.

1-3. OPERATING CONTROLS AND FUNCTIONS

1-3-1. FRONT VIEW



(VX/VI-1560)



(VX-1561)

1. POWER Button
Push this button to turn VCR on and off.

Note : VCR turns on automatically when cassette is inserted.

2. EJECT Button
Push this button to remove the cassette tape.
Cassette can be ejected with the VCR power off as long as unit is connected to an AC outlet.

3. VIDEO CASSETTE COMPARTMENT
Push the cassette gently into compartment until you feel automatic pull. Cassette can be inserted with the power off as long as unit is connected to an AC outlet.

4. REW (Rewind/ Reverse Picture Search) Button
When the VCR is in stop mode, press REW to rewind the tape. When the VCR is in PLAY mode, press REW for high-speed reverse picture search. Press REW again for Jet search. (Push REW again to revert to reverse picture search, or push play to return to playback.)

5. PLAY/ X 2 Button
Push this button to playback a pre-recorded tape.
Press PLAY again to x2 playback.
This function lets you view the picture at x2 speed with the sound mute.

Note : During x2 playback, the sound is muted and some noise may appear on your screen. If noise appear, adjust Trk +, - key.

6. F.F (Fast Forward/Forward picture Search) Button
When the VCR is in stop mode, press FF to forward the tape. When the VCR is in PLAY mode, press FF for high speed forward picture search. Press FF again for Jet search. (Push FF again to revert to forward picture search, or press play to return to play back).

7. STOP Button
Push this button to stop the tape during playback, recording , rewind or fast-forward.

8. P/S , F.ADV Button
Push this button to stop the tape temporarily during playback or recording. Still picture will be shown during playback. Push PLAY to continue play, and push REC button to continue recording. In pause still mode, press the button to advance one frame at a time.

9. REC (RECORD) Button
Push the REC button to start recording.

10. INFRAED REMOTE SENSOR
Receives signal from infrared remote control.

11. FUNCTION DISPLAY INDICATORS

12. CHANNEL UP (∧) / DOWN (∨) Buttons
Push this button to select the channel what you wish to record or view on TV.
Continuous holding of button's will change the channels.

13. MEMORY Button
Push this button for the tape to stop automatically during rewind when the counter reaches about " $0^{H}00^{M}00^{S}$ ".
In CH preset mode on pressing this button the VCR will automatically tune in all possible channels with sufficient signal strength.

14. COUNT/CH. CC Button
Press this button to switch the real channel dispaly to the tape counter display.

15. +, - Button
In still mode, adjust this control to minimize vertical shaking on the TV screen. And press these buttons for clock setting, selection of a real channel, and MFT operation.

16. CLEAR/RESET Button
Use to reset the counter to " $0^{H}00^{M}00^{S}$ " or clear the clock setting data or delete stored channel.

17. INPUT SEL Button
Select recording signal from the tuner or Audio/Video IN JACK.

18. SHIFT Button
Press this button to go to the next step while you are doing clock setting, or the selection between CH and CC.

19. SEARCH Button
Press this button for automatic channel search.

20. MFT Button
Use to tune for fine picture. After pushing MFT button, use control (+) and (-) button to adjust fine tuning.

21. OTR START, OTR LENGTH Button
The START and LENGTH buttons are used for OTR recording.

- Press the START Button to set OTR start time. Start can be delayed for up to 24 hours .
- Press the LENGTH button to set OTR length of recording.

22. TIMER Button
Press this button after programming for unattended recording.
Press this button to stop timer recording.

23. TRACKING +, - Buttons
When you play a tape recorded on a different VCR, horizontal streaks (noise bars) may appear in the picture. Use these buttons to remove noise bars.

24. PICTURE CONTROL
Use this control to soften or sharpen the VIDEO picture on the TV screen.

25. SPEED Button
Press this button to select the speed of tape you to record.

1-3-2 . MULTIFUNCTION DISPLAY

1. RECORDING INDICATOR " REC "
When recording starts, this indicator appears.

2. PLAY INDICATOR " PLAY "
When PLAY, SLOW , FPS, RPS mode, this indicator appears.

3. STATUS INDICATOR
Indicates " ⏻ ⏾ " mark when a video cassette is in tape compartment. And " - - - " Marks indicate the status of VCR. When VCR is in PB, FF or FPS mode, " - - - " marks goes clockwise as fast as linear time counter. In REW or RPS mode , " - - - " marks goes counter clockwise. In still mode, " - - - " marks are stopped.

4. O.T.R INDICATOR " OTR "
When One Touch Recording is set, this indicator appears.

5. TIMER INDICATOR
When TIMER recording is set, this indicator appears.

6. PROGRAM NUMBER " 1 - 8 "
This shows the program number for Timer Recording.

7. MEMORY INDICATOR " MEM "
When MEMORY button is set to ON, this indicator appears.

8. VPS INDICATOR VPS (OPTION)
Illuminates VPS when program recording is set, to VPS.

9. INDEX INDICATOR
This indicator blinks or lights when the INDEX button on remote control is pressed.

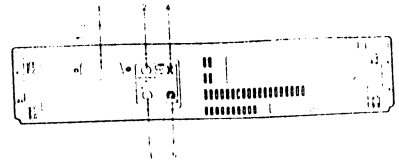
10. GO TO INDICATOR
When GO TO mode, this indicator lights.

11. DIGITAL CLOCK
Normally, the present time is displayed. In OTR mode, the start time is displayed.

12. MULTIFUNCTIONAL INDICATOR
This indicator displays clock/linear time counter/ OTR LENGTH.

13. SPEED INDICATOR " SP ", " LP "
This indicates the speed of tape.

1-3-3. REAR VIEW



1. AUDIO/ VIDEO Socket
A 21-pin standardized audio/video input/output socket for the connection to a stereo TV if equipped with the same type of socket. The audio output can be selected with the AUDIO MONITOR SELECT switch.

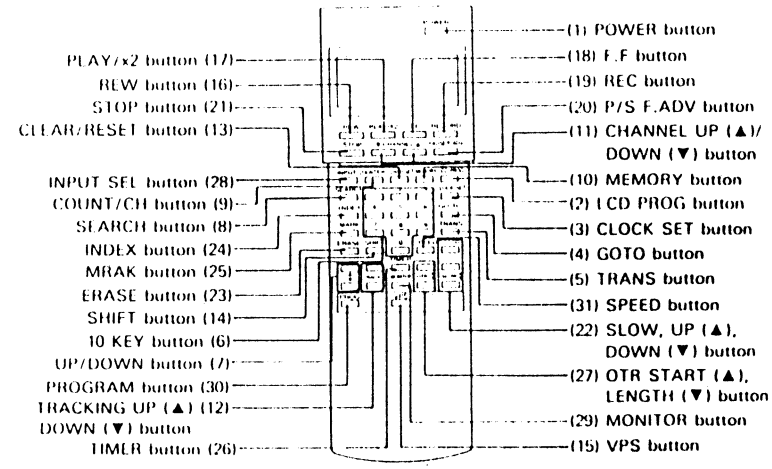
2. ANTENNA IN Connector
Connect an aerial to this connector.

3. RF OUT Connector
Connect to the aerial connector of a TV receiver through the aerial cable (provided).

4. Test Signal Switch (TEST)
Set this S/W to ON when tuning your TV receiver for the video channel. A test signal in the form of two vertical white bars will be available.

5. RF CHANNEL PRE-SET
In some areas the pre-set RF output of your video cassette recorder may clash with a TV broadcast. If this occurs, turn this control using a small screw-driver clockwise or counter-clockwise. A new video channel has now been set and you will need to retune your television video channel to the new RF output.

1-3-4. REMOTE CONTROL (VX/VI-1560)



1. POWER Button
Press POWER for power on and off.

2. LCD PROG Button
Press this button to bring remote control to LCD programming for timer programming.

3. CLOCK SET Button
Press this button for clock setting.

4. GO TO Button
Press this button for GO TO function.

5. TRANS Button
Press this button to transfer LCD programme from remote control to your VCR's set.

6. 10 KEY Buttons (0 through 9)
Select any channel (whether it is in the tuner scanlist or not) by pressing two buttons. (Press " 0 " , and " 8 ", for channel 8.) These buttons are also used for setting the clock and timer programming.

7. UP (△), DOWN (▽) Buttons
In still mode, adjust this control to minimize vertical shaking on the TV screen. And press these buttons for selection of a real channel or MFT operation.

8. SEARCH Button
Press this button for automatic channel search.

9. COUNT/ CH. CC Button
Press this button to switch the real channel display to the tape counter dispaly and vise versa.

10. MEMORY Button
Using this button while rewinding the tape will stop automatically when the counter reaches about " 0 00 00 ". In CH preset mode, when using this button the VCR will tune in all stations with sufficient signal strength.

11. CHANNEL UP (△) DOWN (▽) Buttons
Push this button to select the channel what you wish to record or view on TV. Continuous holding of button's will change the channels.

12. TRACKING UP (△) DOWN (▽) Buttons
Press this buttons to remove noise bars in playback mode.

13. CLEAR/RESET Button
This is used to reset the counter to "0H00M00S" or clear the clock setting data and timer program data or delete stored channel.

14. SHIFT Button
Press this button to go to the next step while you are doing clock setting, LCD programming, or the selection between CH and CC.

15. VPS Button (OPTION)
Press this button for VPS recording.

16. REW Button
To rewind the tape, Press this button while in stop mode. To view the speeded- up picture in the reverse direction for programme search, press this button in PLAY mode. Press REW again for Jet search.

17. PLAY/X2 Button
Push to playback a pre-recorded tape.
Press PLAY again for 2 times playback.

18. F.F Button
To fast forward the tape, press this button while in the stop mode. To view the speeded-up picture in the forward direction for programme search, press this button in PLAY mode. Press F.F again for Jet search.

19. REC Button
Press REC button to begin recording.

20. P/S, F.ADV Button
Push this button to stop the tape temporarily during playback or recording. Still mode will be shown during playback. In pause still mode, press the button to advance one frame at a time.

21. STOP Button
If this button is pressed, VCR stops whatever the VCR is doing (record, playback, rewind, or fast forward).

22. SLOW, UP (△), DOWN (▽) Buttons
Press this button for various slow motion.

23. ERASE Button
Press ERASE to erase index signal.

24. INDEX Button
Press INDEX to turn on the electronic program me indexing feature. Display will prompt you to choose an index number or scan and play.

25. MARK Button
Press MARK to record index signal.

26. TIMER Button
Press this button after programming for unattended recording.

27. OTR START (△), LENGTH (▽) Buttons
These buttons are used for OTR recording.

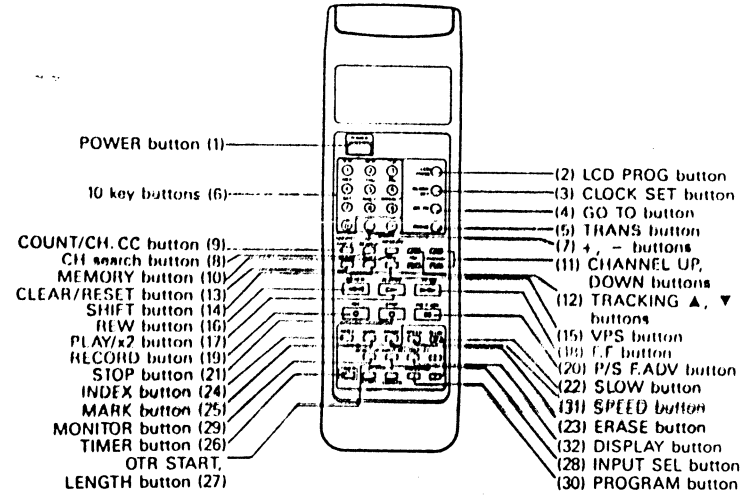
28. INPUT SEL Button
Select recording signal from the tuner, Audio/Video IN JACK or simul cast.

29. MONITOR Button
Press this button when you want to know what is your TV channel during playback mode.

30. PROGRAMME Button
Push the button to enter timer program mode.

31. SPEED Button
Press this button to select the speed of tape you with to record.

1-3-5. REMOTE CONTROL (VX-1561)



1. POWER Button
Press POWER for power on and off.

2. LCD PROG Button
Press this button to bring remote control to LCD programming for timer programming.

3. CLOCK SET Button
Press this button for clock setting.

4. GO TO Button
Press this button for GO TO function.

5. TRANS Button
Press this button to transfer LCD programme from remote control to your VCR's set.

6. 10 KEY Buttons (0 through 9)
Select any channel (whether it is in the tuner scanlist or not) by pressing two buttons. (Press " 0" , and " 8 ", for channel 8.) These buttons are also used for setting the clock and timer programming.

7. +, - Buttons
In still mode, adjust this control to minimize vertical shaking on the TV screen. And press these buttons for selection of a real channel or MFT operation.

8. SEARCH Button
Press this button for automatic channel search.

9. COUNT/ CH. CC Button
Press this button to switch the real channel display to the tape counter dispaly and vise versa.

10. MEMORY Button
Using this button while rewinding the tape will stop automatically when the counter reaches about "0H00M00S". In CH preset mode, when using this button the VCR will tune in all stations with sufficient signal strength.

11. CHANNEL UP (△) DOWN (▽) Buttons
Push this button to select the channel what you wish to record or view on TV. Continuous holding of button's will change the channels.

12. TRACKING UP (△) DOWN (▽) Buttons
Press this buttons to remove noise bars in playback mode.

13. CLEAR/RESET Button
This is used to reset the counter to "0^{H}(0)^{M}(0)^{S}" or clear the clock setting data and timer program data or delete stored channel.

14. SHIFT Button
Press this button to go to the next step while you are doing clock setting, LCD programming, or the selection between CH and CC.

15. VPS Button (OPTION)
Press this button for VPS recording.

16. REW Button
To rewind the tape, Press this button while in stop mode. To view the speeded- up picture in the reverse direction for programme search, press this button in PLAY mode. Press REW again for Jet search.

17. PLAY/X2 Button
Push to playback a pre-recorded tape.
Press PLAY again to 2 times playback.

18. F.F Button
To fast forward the tape, press this button while in the stop mode. To view the speeded-up picture in the forward direction for programme search, press this button in PLAY mode. Press F.F again for Jet search.

19. REC Button
Press REC button to begin recording.

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Push this button to stop the tape temporarily during playback or recording. Still mode will be shown during playback. In pause still mode, press the button to advance one frame at a time.

21. STOP Button
If this button is pressed, VCR stops whatever the VCR is doing (record, playback, rewind, or fast forward).

22. SLOW Button, +, - Buttons
Press this button for various slow motion.

23. ERASE Button
Press ERASE to erase index signal.

24. INDEX Button
Press INDEX to turn on the electronic program me indexing feature. Display will prompt you to choose an index number or scan and play.

25. MARK Button
Press MARK to record index signal.

26. TIMER Button
Press this button after programming for unattended recording.

27. OTR START, LENGTH Buttons
These buttons are used for OTR recording.

28. INPUT SEL Button
Select recording signal from the tuner, Audio/Video IN JACK or simul cast.

29. MONITOR Button
Press this button when you want to know what is your TV channel during playback mode.

30. PROGRAM Button
Push the button to enter timer program mode.

31. SPEED Button
Press this button to select the speed of tape you with to record.

32. DISPLAY Button (OPTION)
Press this button to display or remove OSD characters.

1-4. CLEANING AND LUBRICATION

1-4-1. CLEANING TAPE MECHANISM

Periodic cleaning is necessary to insure continued excellent performance of the tape mechanism . To clean the following parts, patch and solvent are available.

1. Capstan shaft.
2. All idler wheels.
3. All tape guide posts.
4. Supply and take-up reels.
5. Pinch roller.
6. Capstan belt.
7. Capstan motor pulley.

To clean video heads, full erase head, and audio/control (A/C) head, use only head cleaning kit and solvent.

Note : When cleaning video heads, move the cleaning stick in the direction of head rotation. Wiping in a vertical direction may damage the heads.

1-4-2. LUBRICATION TAPE MECHANISM

The tape transport mechanism is properly lubricated at the factory. In normal use cycles, and with average environmental conditions, additional lubrication should not be required during the first year of operation.

Depending on the frequency of use and environmental conditions, periodic lubrication may be required. When relubricating,remove old lubricant first, then sparingly apply new lubricant.
(Excessive lubricant may be transferred to other assemblies causing malfunction).

Use grease on the following parts every 1,000 hours of operations. (See exploded view for location.)

1. Between base pole assembly (L,R) and main base
2. Pinch roller base, Cam.
3. Gear master cam.
4. Gear E/J drive.
5. Gear I/D " L,R ".
6. Base pole edge.
7. Slide main brake.
8. Braket E/J drive.
9. Sector gear.

Oil may be required for the following parts after, 1,000 hours of operation.(See exploded view for location).

Main base
1. Arm tension mould.
2. Shaft reel disk " L,R " mould.
3. Shaft gear worm wheel.

Other parts which are not listed above do not be required lubrication, except when parts are replaced. Use appropriate oil or grease as indicated on exploded view.

1-5. ABBREVIATIONS

2X	: Double
4.43MHz	: Colour Sub Carrier
ACC	: Automatic Colour Control
ACK	: Automatic Colour Killer
ADD	: Adder
AFC	: Automatic Frequency Control
AFT	: Automatic Fine Tuning
AGC	: Automatic Gain Control
AL	: Always
ALC	: Automatic Level Control
AMP	: Amplifier
APC	: Automatic Phase Control
AUX	: Auxiliary
BATT	: Battery
BD	: Burst Demphasis
BE	: Burst Emphasis
BH	: Power Supply for Selecting VHF High Band
BL	: Power Supply for Selecting VHF Low Band
BPF	: Band Pass Filter
C.FG	: Capstan Frequency Generator
C.SYNC	: Composite Sync
CAFC	: Capstan Auto Frequency Control
CAPC	: Capstan Auto Phase Control
CATV	: Cable TV
CAR	: Carrier
CAP	: Capstan
CCD	: Charge Coupled Devices
CH	: Channel
CHAR.	: Character
CHROMA	: Chrominance
CM	: Capstan Motor
COMP	: Comparator
CST	: Cassette
C-ERR	: Capstan Error
CTL	: Control
C.PG	: Capstan Pulse Generator
CUR.EMPH	: Current Emphasis
D.FG	: Drum Frequency Generator
D.O.C	: Drop Out Compensator
D.PG	: Drum Pulse Generator
D/A	: Digital-to-Analog
D/C	: Dark/Clip
D.AFC	: Drum Auto Frequency Control
D.APC	: Drum Auto Phase Control
DE-EMPH	: De-Emphasis
DET	: Detector
DEV	: Deviation
DLYD	: Delayed
DM	: Drum Motor
DEMOD	: Demodulator
D.D	: Direct Drive
E-E	: Electronic-to Electoronic
EMPH	: Emphasis
ENV	: Envelope
EQ	: Equalizer
F.ADV	: Frame Advance
F-V	: Frequency to Voltage Converter
F.FWD	: Fast Forward
FH	: Frequency Horizontal
FG	: Frequency Generator
FM	: Frequency Modulator
FSC	: Frequency Sub Carrier
FWD	: Forward
FC	: Frequency Center
FL	: Frequency Low
GEN	: Generator
GND	: Ground
HPF	: High Pass Filter
IF	: Intermediate Frequency
IR	: Infrared Receiver
LED	: Light Emitting Diode
LIM	: Limiter
LPF	: Low Pass Filter
LUMA	: Luminance
LCD	: Liquid Crystal Display
LNR	: Linear
MIX	: Mixer
MM	: Monostable Multivibrator
MTS	: Multi Sound Television System
MEM	: Memory
N.C	: No Connection
NORM	: Normal
OSC	: Oscillator
OTR	: One Touch Recording
OSP	: On Screen Programme
OSD	: On Screen Display
PB	: Play Back
P.C	: Power Control
PG	: Pulse Generator
PIF	: Picture Intermediate Frequency
PLL	: Phase Lock Loop
PRG	: Programme

PWM	: Pulse Width Modulation
PWR	: Power
P/S	: Pause/Still
PD	: Power Detector
REG	: Regulator
REC	: Record
REC.SAF	: Record Safety
REW	: Rewind
RF	: Radio Frequency
REV	: Reverse
RECT	: Rectifier
REF	: Reference
SC	: Simul-Cast
SC	: Sub-Carrier
SCK	: Shift Clock
SDA	: Serial Data
SIF	: Sound Intermediate Frequency
SP	: Standard Play
SW25Hz	: Head Switching Pulse
SYNC	: Synchronizing Signal
SYSCON	: System Control
STB	: Strobe
SI	: Serial Input
SO	: Serial Output
SW	: Switch
TP	: Test Point
TRK	: Tracking
UL	: Unloading
VT	: Tuning Voltage
VP	: Vertical Lock pulse
V-REF	: Voltage Reference
V-SYNC	: Vertical Sync
VCO	: Voltage Controlled Oscillator
VCR	: Video Cassette Recorder
VIF	: Video Intermediate Frequency
VPS	: Video Programming System
VHS	: Video Home System
VXO	: Voltage Controlled Crystal Oscillator
VSS	: Voltage Supply Source
VISS	: VHS Index Search System
W/C	: White/Clip
W/D	: White/Dark
Y	: Luminance
μP	: Microprocessor

2. DISASSEMBLY

2-1. INSTRUMENT DISASSEMBLY

2-1-1. Top Cabinet Removal

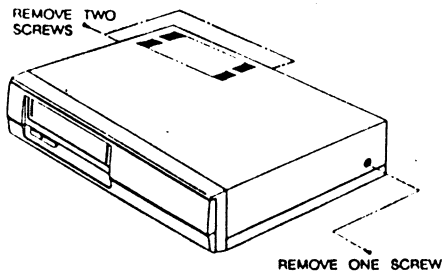


Fig. 1 Top Cabinet Removal

1. Remove three (3) screws located at the rear of the top cabinet.
2. Carefully lift the back of the top cabinet and slide it to the rear to remove.

2-1-2. Bottom Cover Removal

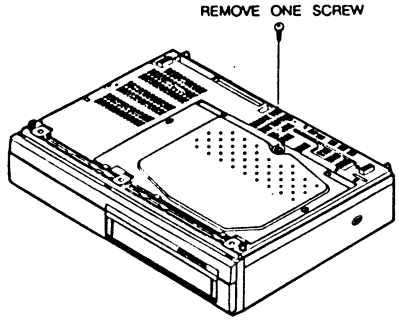


Fig. 2 Bottom Cover Removal

1. Remove one (1) screw holding bottom cover.

2-1-3. Front Panel Removal

1. Remove the top cabinet. (Fig.1)
2. Remove one (1) screw from the top of the front panel.
3. Release four (4) tabs from the front panel.
4. Release three (3) tabs from the bottom of the front panel.
5. Tilt the front panel forward to remove.

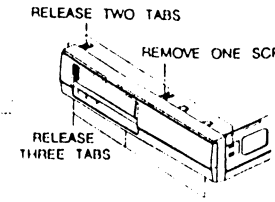


Fig. 3 Front Panel Removal

2-1-4. Main Circut Board Removal

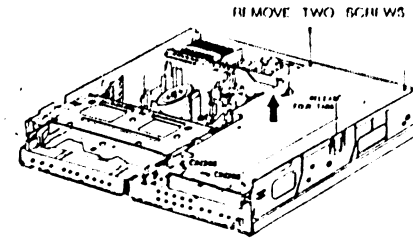


Fig. 4 Main Circuit Board removal

1. Follow the procedure for removing top cabinet. (Fig.1)
2. Remove two (2) screws from the frame.
3. Release four (4) tabs from the frame.
4. Disconnect two (2) connectors (CN205.CN206) between the main circuit board and timer circuit board.

2-1-5. Function Switch Circuit Board Removal

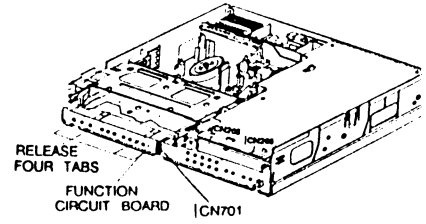


Fig. 5 Function Switch Circuit Board Removal

1. Follow the procedure for removing the panels. (Figs. 1 and 3)
2. Release tabs from the frame. (Fig.5)
3. Remove four (4) tabs holding the function switch circuit board.
4. Disconnect CN701 from the timer circuit board.

2-1-6. Timer Input Key Circuit Board Removal

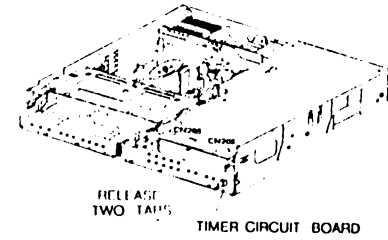


Fig. 6 Timer Input Key Circuit Board Removal

1. Follow the procedure for removing the panels. (Fig.1 and 3)
2. Release two (2) tabs holding circuit board from the frame.

2-1-7. Pre-Amp Circuit Board Removal

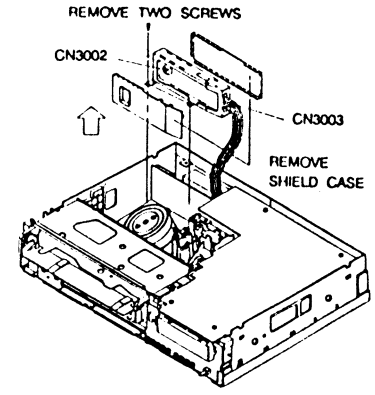


Fig. 7 Pre-Amp Circuit Board Removal

1. Follow the procedure for removing the top cabinet (Fig.1), bottom cover (Fig.2) and front panel (Fig.3).
2. Remove two (2) screws holding the Pre-Amp from the frame.
3. Disconnect the one (1) connector on the Pre-Amp circuit board.
4. Pull out the Per-Amp ass'y in the direction of the arrow and then release shield case.

2-1-8. Regulator Circuit Board Removal

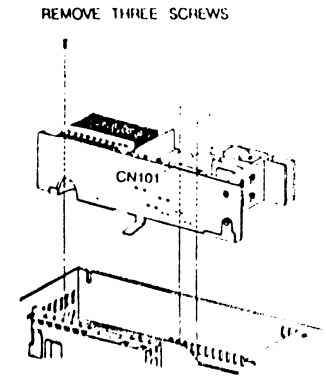


Fig. 8 Regulator Circuit Board Removal

1. Follow the procedure for removing the top cabinet (Fig.1)
2. Remove the regulator cover and three (3) screws from the frame.
3. Disconnect one (1) connector (CN101) on the main circuit board.
4. Taking care of the cable assemblies, lift up the regulator circuit board upward to remove.

2-2. MECHANICAL DISASSEMBLY

Tape Transport Mechanism Identification

(Top Side)

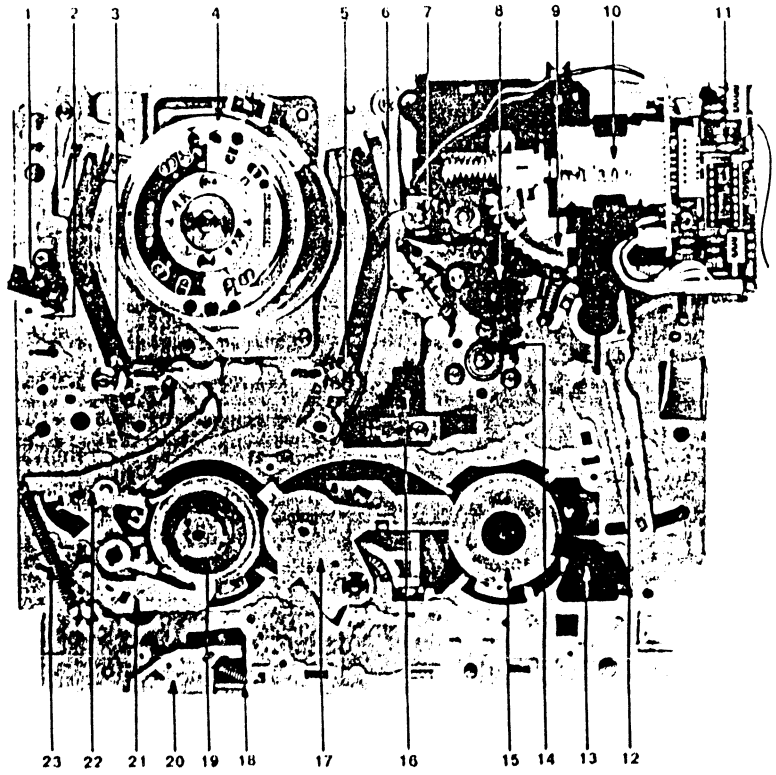


Fig. 9 Tape Transport Mechanism-Top View

1. F/E HEAD
2. SUPPLY ROLLER
3. POLE BASE "L" ASS'Y
4. CYLINDER ASS'Y
5. POLE BASE "R" ASS'Y
6. A/C HEAD ASS'Y
7. CAM ADJUST
8. PINCH ROLLER LEVER ASS'Y
9. MASTER CAM GEAR
10. L/D UNIT ASS'Y
11. P.C.B JOINT ASS'Y
12. BRAKE LEVER CAM ASS'Y
13. SUB BRAKE "R"
14. REVIEW ARM ASS'Y
15. REEL DISK (R)
16. LED ASS'Y
17. SUB IDLER ASS'Y
18. REC S/W SPRING
19. REEL DISK (L)
20. REC S/W LEVER
21. SUB BRAKE "L"
22. TENSION ARM ASS'
23. TENSION SPRING

(Bottom Side)

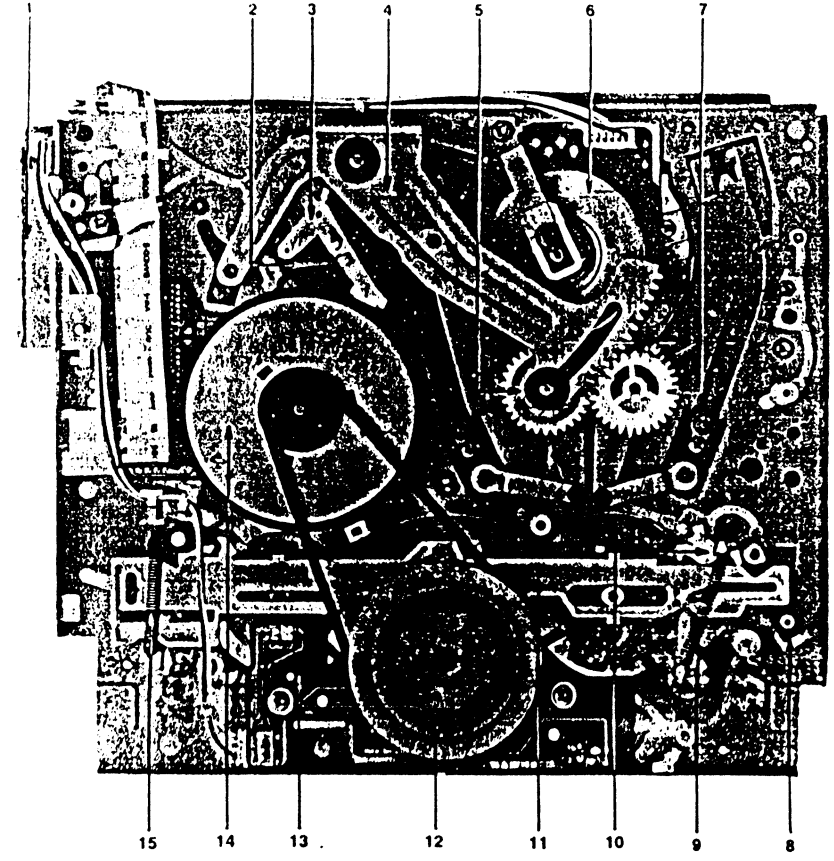


Fig. 10 Tape Transport Mechanism-Bottom View

1. EJECT DRIVE BRACKET
2. D.D CAPSTAN BRAKE SPRING
3. D.D CAPSTAN BRAKE
4. SECTOR GEAR ASS'Y
5. LOADING GEAR "R" ASS'Y
6. CYLINDER MOTOR
7. LOADING GEAR "L" ASS'Y
8. TENSION CONTROL LEVER
9. SUB SPRING "L"
10. MAIN BRAKE "L"
11. MAIN BRAKE SLIDE ASS'Y
12. CLUTCH ASS'Y
13. REEL P.C.B ASS'Y
14. D.D CAPSTAN MOTOR
15. SUB SPRING "R"

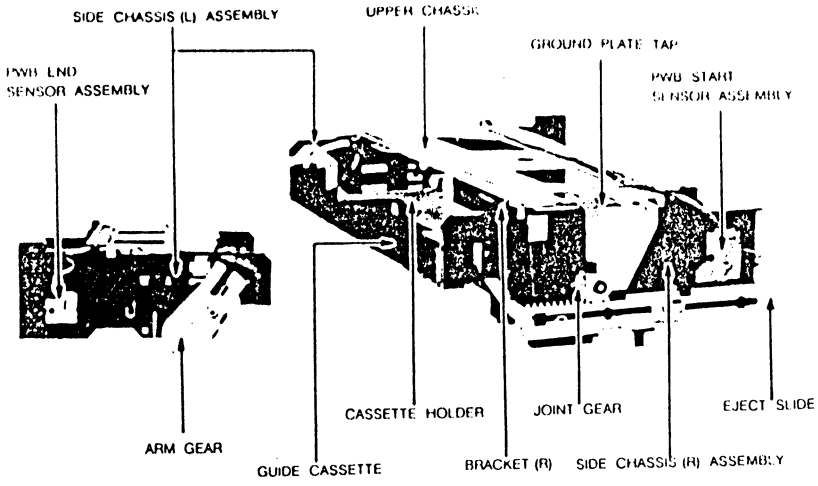


Fig. 11 F/L Housing Assembly Identification

2-2-1. Housing Assembly Removal

1. Follow the procedure for removing the cover (See Figs. 1 to 3).
2. Disconnect the housing sensor connector from the PWB Deck Joint.
3. Remove two (2) screws holding the housing assembly and the Main Base.
4. Push the housing assembly in the direction of arrow A and then lift up in the direction of arrow B.

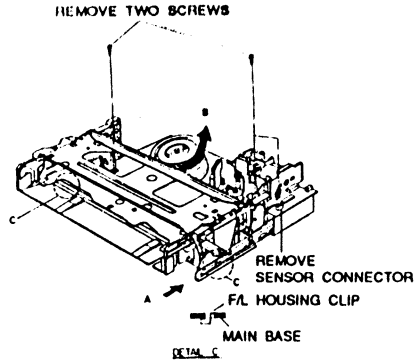


Fig. 12 Housing Assembly Removal

2-2-2. PWB Sensor (S) Assembly Removal

1. Push the wire toward A,B arrows and then remove
2. Push apart clips as shown in C direction and remov P.C.B.

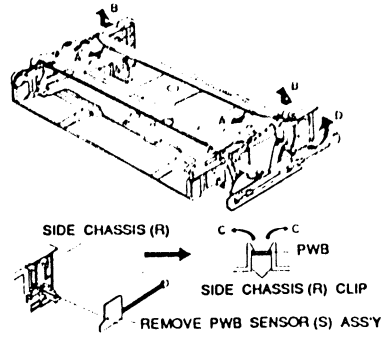


Fig. 13 PWB Sensor (S) Assembly Removal

2-2-3. PWB Sensor (E) Assembly Removal

1. Push apart clip as shown in direction A and remove P.C.B. in direction C.

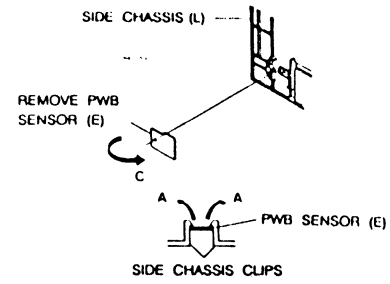


Fig. 14 PWB Sensor (E) Assembly Removal

2-2-4. Sub Assembly Removal

1. Remove two (2) screws holding the upper chassis and remove the ground wire assembly and the ground plate top.
2. Lift the upper chassis toward A.
3. Lift the assembly cassette holder toward E.
4. Push the eject slide toward E to the end, lift it in the direction of arrow C.
5. Release clip on right side of chassis in direction D and remove the Joint Gear.

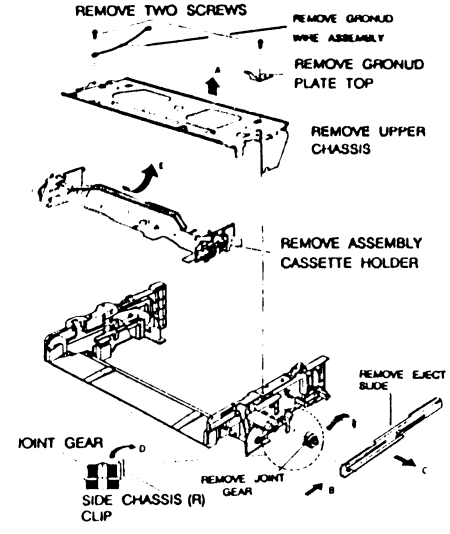


Fig. 15 Sub Assembly Removal

2-2-5. Side Arm Assembly Removal

1. Release the clip as shown in A.
2. Lift chassis right as shown in C.
3. Release the clip as shown in D.
4. Release the clip on left chassis, same as in step 2.
5. Remove left side chassis as shown in F.

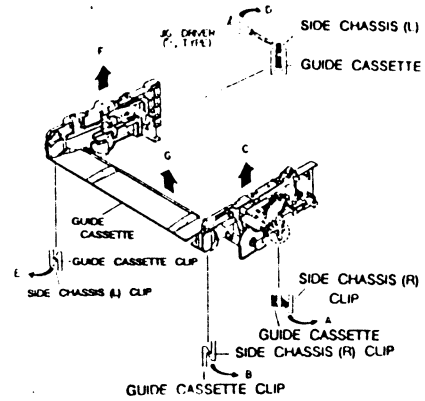


Fig. 16 Side Arm Assembly Removal

2-2-6. Arm Gear Removal

1. Remove eject spring by prying out center.
2. Remove spring tension arm (R) from the hook of side arm (R).
3. Remove the arm gear.

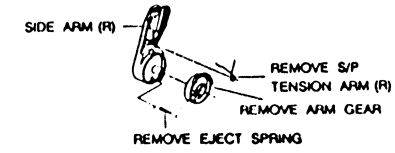


Fig. 17 Arm Gear Removal

2-2-7. Cassette Holder Assembly Removal

1. Remove the spring the holder L/R and lever LID L/R and remove the lever LID.
2. Remove the key cassette from the side holder (R) and remove the spring key cassette from the key cassette.
3. Lift the plate cassette upper toward A after taking off the hook of side holder L/R.
4. Lift up the side holder L/R from the cassette holder.

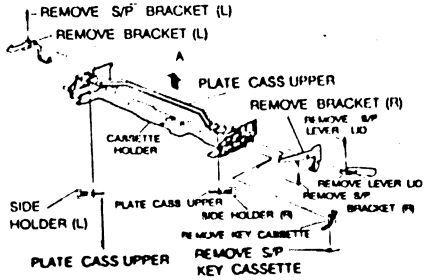


Fig. 18 Cassette Holder Assembly Removal

2-2-8. Side Chassis (L) Assembly Removal

1. Release light shutter spring from side chassis.
2. Remove light shutter after releasing tab as shown in A.
3. Lift up the earth plate to remove.
4. Remove the mask cam lever in the direction of arrow B from the side chassis (L).

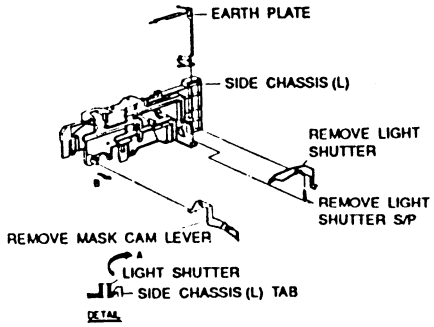


Fig. 19 Side Chassis (L) Assembly Removal

NOTE : To re-assemble reverse procedure.

2-2-9. Joint Gear, Arm Gear and Eject Slide Assembly

1. Assemble the assembly point of the joint gear and the arm gear.
2. Assemble the joint gear with the eject slide as Fig.20.

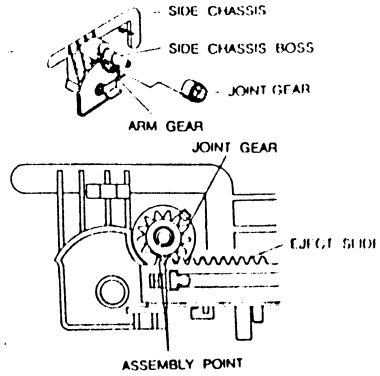


Fig. 20 Joint Gear, Arm Gear and Eject Slide Assembly

2-2-10. Deck Assembly and Assembly of F/L Housing Assembly

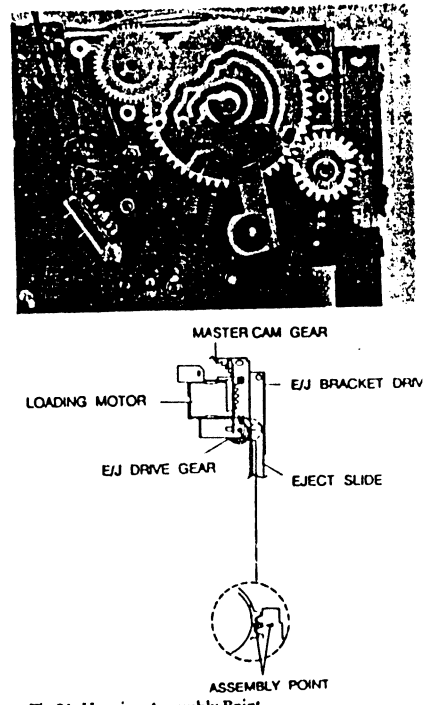


Fig.21 Housing Assembly Point

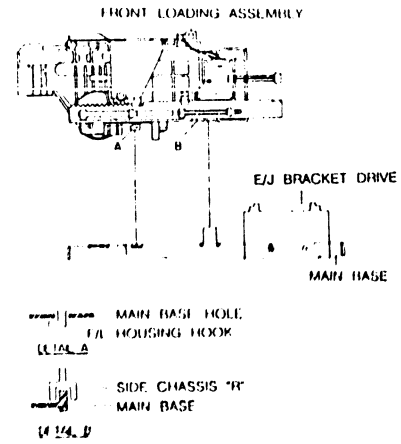


Fig.22 Mechanism Chassis Assembly Removal

NOTE : Perform this procedure with mechanism in the eject position.

1. Pull the eject slide gear and assemble the point of E/J Drive Gear and E/J Slide Gear. (Fig. 21)
2. While holding cassette holder in the eject position, align the A and B assembly points as shown in Fig. 22.
3. Tighten two (2) screws.

NOTE : Recheck A and B position after reinstallation, if incorrect repeat above.

• Operating the VCR without Housing Assembly.

1. Connect a jumper to short circuit momentarily between pin 1 (ground) and pin 3 (start sensor) of CN6202 on DECK JOINT.
2. After loading, function key is available to be used to select desired mode.

• Operating the VCR without inserting a cassette tape.

1. Remove the Housing upper chassis.
2. Push the cassette holder, while hiding the both sensors of LED IR.
3. After loading, function key is available to be used.

2-2-11. Cylinder Assembly Removal

CAUTION : Take extreme care when removing the upper cylinder. Do not touch the video head tips located at the upper cylinder during servicing.

Follow the Procedure for Removing

1. Remove the top cover. (See Fig. 1)
2. Remove the bottom cover. (See Fig. 2)
3. Remove the cylinder ass'y from the main base.
4. Remove two (2) screws from the upper cylinder ass'y
5. Unsolder PWB-Upper cylinder and then lift upper cylinder.
6. Remove screw from lower cylinder and detach TR holder ass'y.
7. Remove two (2) screws from the motor rotor, then remove it.
8. Remove three (3) screws from the motor stator and remove it.

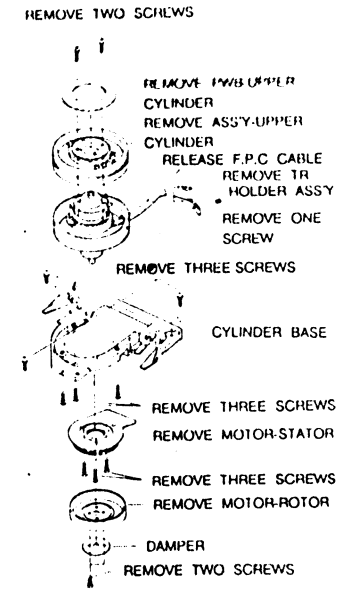


Fig. 23 Cylinder Assembly Removal

2-2-12. Upper Cylinder Removal

1. Unsolder the PWB upper Cylinder from the upper cylinder ass'y.
2. Remove two (2) screws from the upper cylinder ass'y and remove it.

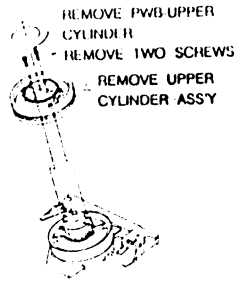


Fig. 24 Upper Cylinder Removal

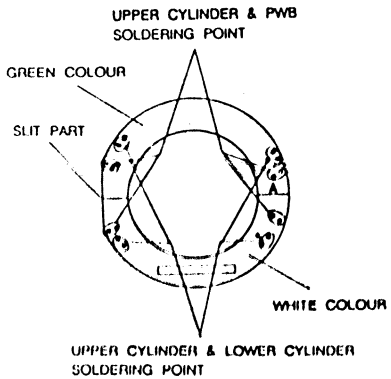


Fig. 25 PWB Upper Cylinder

• Upper Cylinder Assembly

1. Align the head tip of Green PCB on upper cylinder bottom side (Fig. 26) to slit of rotary trans on lower cylinder (Fig. 27).
2. Tighten two (2) screws.

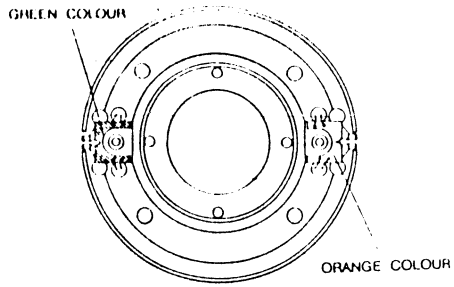


Fig. 26 Upper Cylinder Bottom View

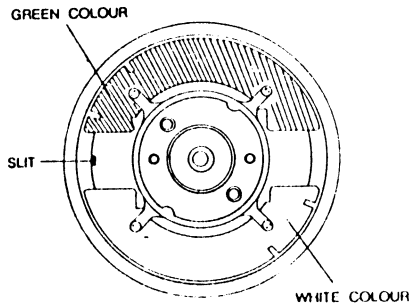


Fig. 27 Lower Cylinder Top View

2-2-13. Lower Cylinder Removal

1. Lift up the lower cylinder from the cylinder base.

NOTE : Align cylinder base pin before reinstalling.

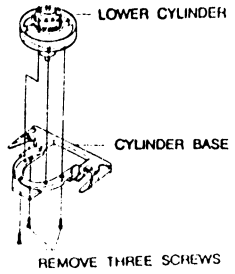


Fig. 28 Lower Cylinder Removal

2-2-14. Cylinder Motor Removal

1. Remove two (2) screws from the motor rotor, then remove rotor .

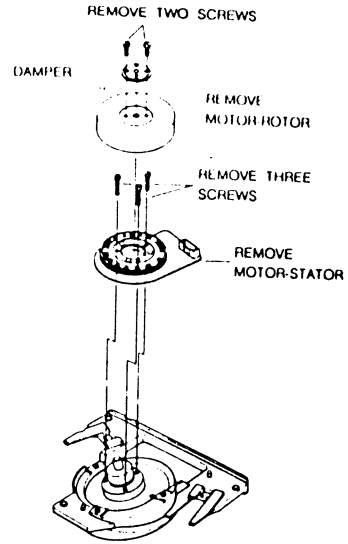


Fig. 29 Cylinder Motor Removal

NOTE : Mark rotor position to insure correct phase orientation upon reinstallation.

2. Remove three (3) screws from the motor stator and remove it from the lower cylinder.

• Motor rotor Assembly

1. Tighten 2 screws while fixing the hole of cylinder bush and rotor (Fig. 30)

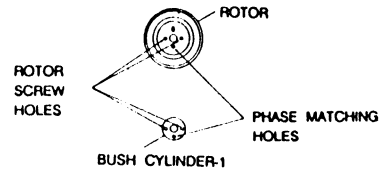


Fig. 30 Motor Rotor Assembly

2-2-15. Cylinder Assembly Removal from Main Base

1. Remove three (3) screws securing the cylinder base and main base.
2. Lift the cylinder base to remove.

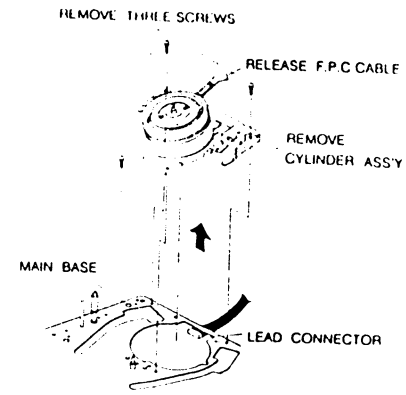


Fig. 31 Cylinder Assembly Removal

2-2-16. Loading Assembly and E/J Drive Bracket Removal

1. Remove the top cabinet. (See Fig. 1)
2. Remove the screw from the PWB joint, and then lift up the PWB joint.
3. Remove three (3) screws of loading unit assembly.
4. Lift up the loading unit assembly.
5. Remove two (2) screws securing eject drive bracket from the side of main base.
6. Lift to remove.

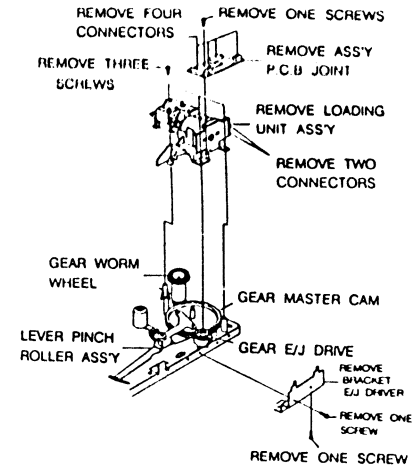


Fig. 32 Loading Assembly and E/J Drive Bracket Removal

2-2-17. Brake Lever Cam Assembly Removal

1. Remove the slit washer from pinch roller stud.
2. Lift up the brake lever cam assembly.

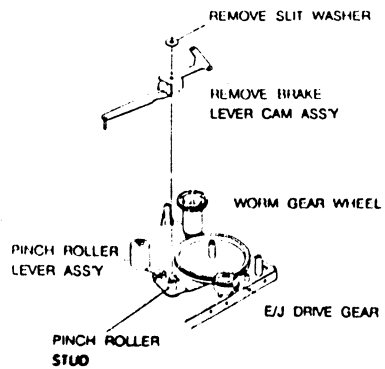


Fig. 33 Brake Lever Cam Assembly Removal

2-2-18. Worm Gear Wheel, Master Cam and Eject Drive Gear Removal

1. Lift up the worm gear wheel.
2. Lift up the eject drive gear.
3. Lift up the master cam gear.

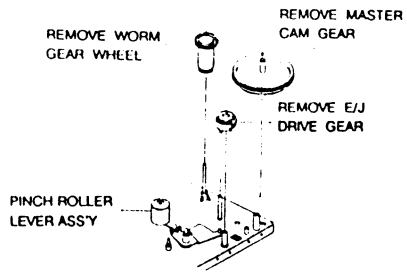


Fig. 34 Worm Gear Wheel, Master Cam and Eject Drive Gear Removal

2-2-19. Pinch Roller Lever Assembly Removal

1. Lift up the pinch roller assembly.
2. Remove the spring pinch roller.

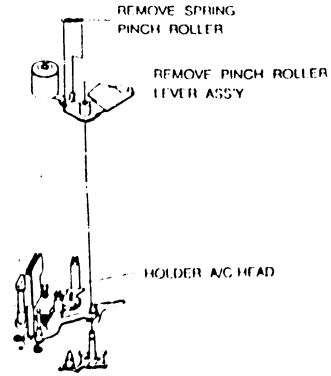


Fig. 35 Pinch Roller Lever Assembly Removal

2-2-20. Sector Gear Removal

1. Remove two (2) slit washers securing sector gear stud and loading gear "R" from the bottom side of main base.
2. Place loading gears in eject position. Lift up the sector gear.

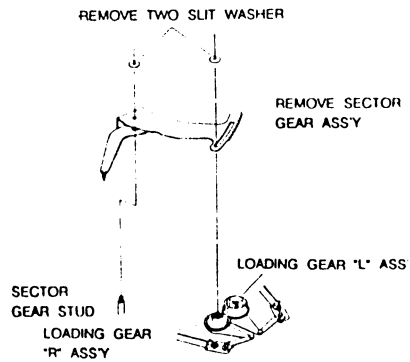


Fig. 36 Sector Gear Removal

2-2-21. Loading Gear L/R Removal

1. Release the tab securing the loading gear ass'y. to the loading gear arm from the bottom.
2. Lift up the loading gear L/R to remove.

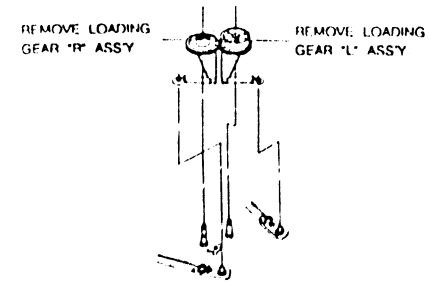


Fig. 37 Loading Gear L/R Removal

2-2-22. Reel Disk "R" Removal

1. Release locking tab on the beneath of the sub brake "R".
2. Remove the sub brake "R".
3. Remove the slit washer.
4. Lift up the reel disk.
5. Remove the plain washer.

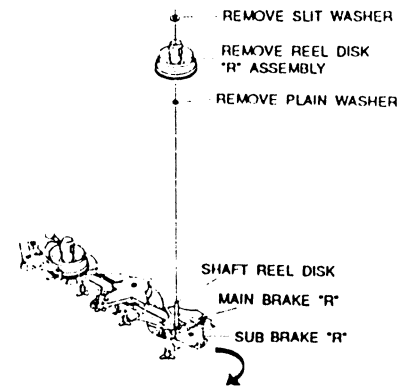


Fig. 38 Reel Disk "R" Removal

2-2-23. Reel Disk "L" Tension Band & Tension Arm Removal

1. Take off the tension arm spring.
2. Align tension arm adjustment with slot in the tension band, then pull up to remove.
3. Release two tabs on tension arm.
4. Remove the tension band.
5. Remove slit washer.
6. Lift up the reel disk "L" after removing the sub brake "L" in the direction of arrow.
7. Remove the plain washer.

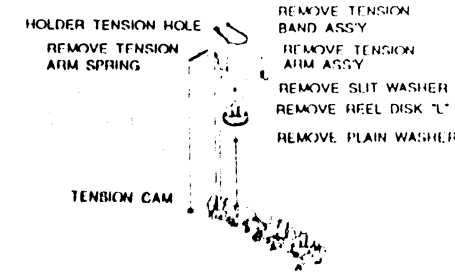


Fig. 39 Reel Disk "L" Tension Band & Tension Arm Removal

2-2-24. Sub Brake L/R and REC Lever Switch Removal

1. Remove the sub brake spring "L". (Refer to the main brake slide removal)
2. Remove the sub brake spring "R". (Refer to the main brake slide removal)
3. Remove the REC lever switch.
4. Release tab from beneath chassis. Lift up the sub brake L/R.
5. Release tab from beneath chassis. Remove the REC lever switch.

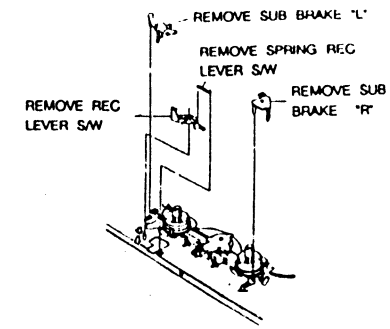


Fig. 40 Sub Brake L/R and REC Lever Switch Removal

2-2-25. Main Brake L/R and Tension Lever Control Removal

1. Remove capstan belt.
2. Remove slit washer securing clutch ass'y.
3. Release main slide yellow spring by unhooking from supply reel tab.
4. Release four (4) tabs and remove main slide.
5. Release tab and remove the tension lever control. Refer to Fig. 41.
6. Release tab and remove main brake left/right.

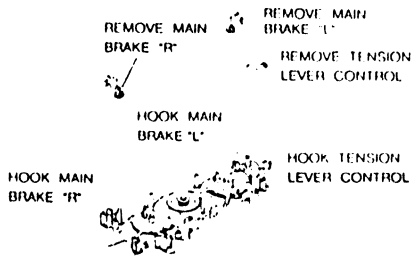

REMOVE MAIN BRAKE "R"
REMOVE MAIN BRAKE "L"
REMOVE TENSION LEVER CONTROL
HOOK MAIN BRAKE "L"
HOOK TENSION LEVER CONTROL
HOOK MAIN BRAKE "R"

Fig. 41 Main Brake L/R and Tension Lever Control Removal

2-2-26. Capstan Motor and Capstan Motor Brake Removal

1. Remove the D.D capstan brake spring. Turn assembly to release tab.
2. Lift up the D.D capstan brake to remove.
3. Remove capstan cable from PCB.
4. Remove three (3) screws holding the capstan motor from the main base.
5. Remove the capstan motor belt from the capstan motor pulley and the clutch ass'y. Remove motor.

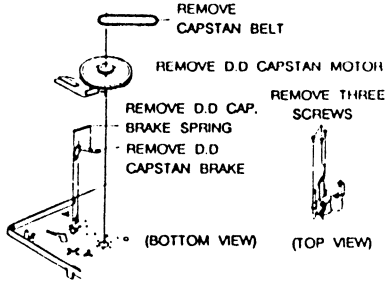


Fig. 42 Capstan Motor and Capstan Motor Brake Removal

2-2-27. Idler Clutch and Shift Lever Removal

1. Remove the slit washer.
2. Remove the clutch assembly.
3. Pull the shift lever up toward vertical, push forward chassis back, then up to remove.

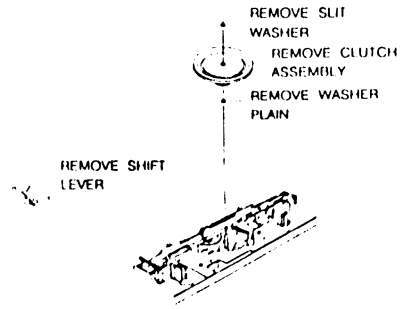


Fig. 43 Idler Clutch and Shift Lever Removal

2-2-28. Main Brake Slide Removal

1. Remove the sub "L" spring.
2. Remove the main slide spring from supply reel tab.
3. Lift up the main brake slide after releasing the securing tabs.
4. Remove the idler shift spring after releasing the securing tabs.

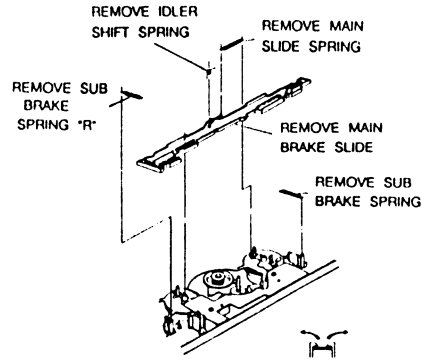

REMOVE IDLER SHIFT SPRING
REMOVE MAIN SLIDE SPRING
REMOVE SUB BRAKE SPRING "R"
REMOVE MAIN BRAKE SLIDE
REMOVE SUB BRAKE SPRING

Fig. 44 Main Brake Slide Removal

2-2-29. PWB Reel Removal

1. Disconnect the lead connector assembly.
2. Remove the two (2) screws.
3. Lift up the PWB reel.

NOTE : When reinstalling PWB, pull REC safety switch arm back.

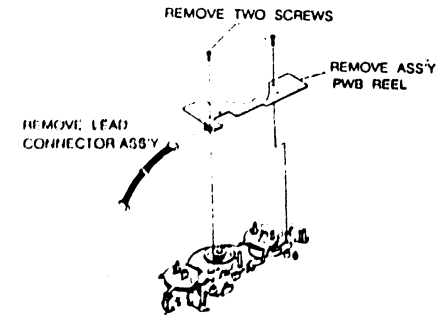


Fig. 45 PWB Reel Removal

2-2-30. Idler Sub Assembly Removal

1. Remove the slit washer.
2. Lift up the idler sub assembly.

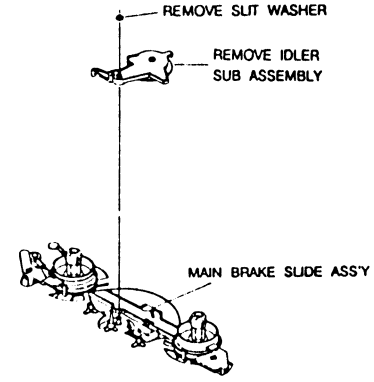


Fig. 46 Idler Sub Assembly Removal

2-2-31. Assembly LED Removal

1. Disconnect the lead connector assembly.
2. Remove the one (1) screw.
3. Lift up the LED holder.

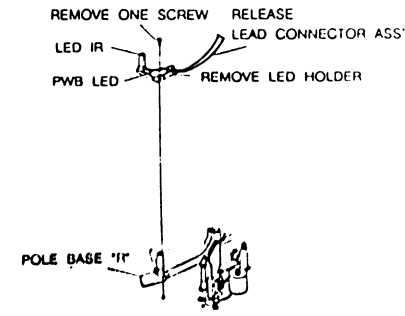


Fig. 47 Assembly LED Removal

2-2-32. Worm Gear Positioning (Eject Mode)

* Assemble in the eject mode, rotate worm gear full counter clockwise.

2-2-33. Pinch Roller Assembly and Master Cam Gear Assembly

1. Fasten pinch roller ass'y. to pinch roller stud.
2. Reinstall master cam gear with pinch roller ass'y. in the eject mode. Refer to Fig. 48.

NOTE : Align the assembly pin with the Master Cam gear alignment hole.

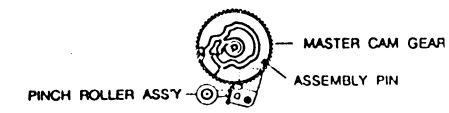
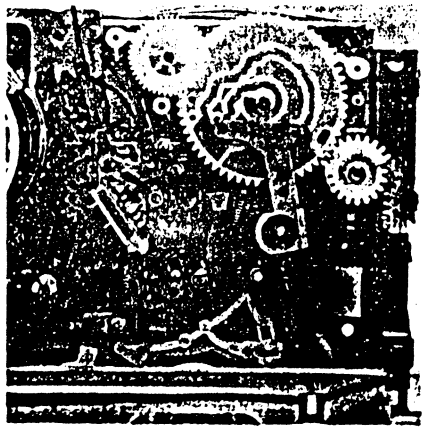


Fig. 48 Pinch Roller Assembly and Master Cam Gear Assembly

2-2-34. Brake Cam Lever, Eject Drive Gear and Master Cam Gear Assembly

1. Assemble the brake cam ass'y. on the pinch lever stud as in Fig. 49.
2. Assemble master cam gear with the brake cam lever ass'y. in eject mode.
3. Assemble gear E/J (eject) drive to stud as shown in Fig. 49, secure with slit washer.

NOTE : Align arrows on master cam & eject drive gear.



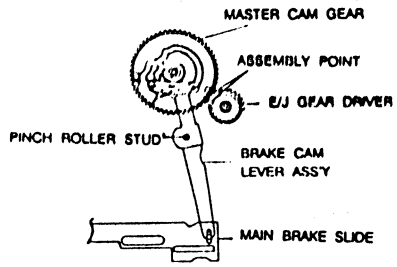


Fig. 49 Brake Cam Lever, Eject Drive Gear and Master Cam Gear Assembly

2-2-35. Ass'y Loading Unit and Master Cam Gear Assembly

1. Align master cam hole with chassis hole.
2. Align program switch arrows, push brake tension lever to align tracking pin as shown in Fig. 50.
3. Align master cam & eject drive gear arrows.
4. Reinstall loading gear ass'y.

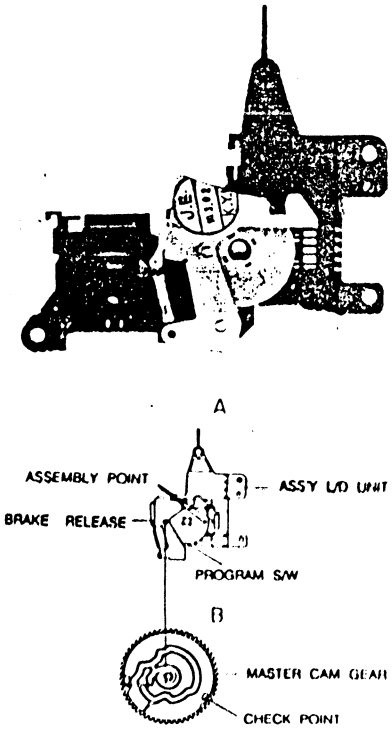


Fig. 50 Ass'y Loading Unit and Master Cam Gear Assembly

2-2-36. Sector Gear and Loading Gear Assembly

1. Reinstall the loading gear L/R assemblies in the eject mode while align the timing marks. (Fig. 51)
2. Install sector gear and align with timing mark on the supply side loading gear. (Fig. 52)
3. Secure with slit washers.

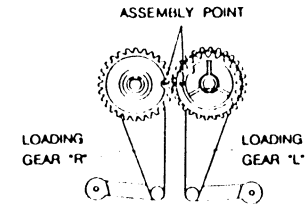
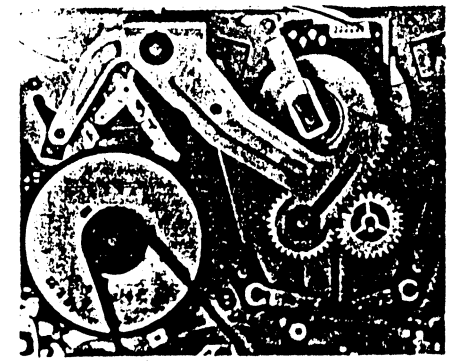


Fig. 51 Loading Gear L/R Assembly point



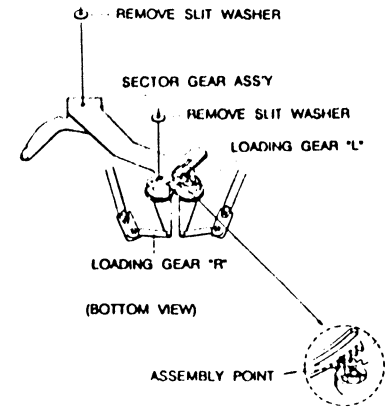


Fig. 52 Sector Gear and Loading Gear Assembly

2-2-37. Pole Base Removal

1. Loosen one (1) screw from bottom of pole base.
2. Slide and remove retainer clips.
3. Remove pole base ass'y.
4. Install in reverse order.

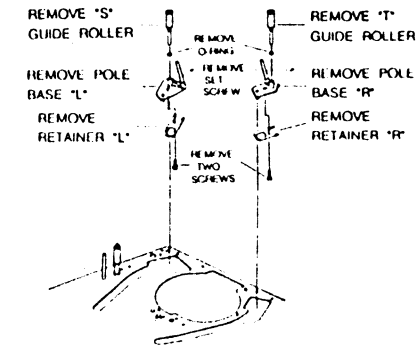


Fig. 53 Pole Base Removal

2-2-38. Audio Control Head Assembly Removal

1. Remove the nylon nut holding A/C head stud.
2. Remove three (3) screws and spring.
3. Lift up the A/C head assembly.
4. Remove A/C head holder from the stud.
5. Lift up the spring torsion A/C.

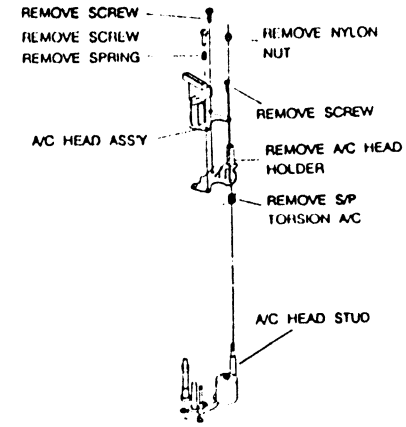


Fig. 54 Audio Control Head Assembly Removal

2-2-39. Review Arm Assembly Removal

1. Remove the nylon nut holding the review arm stud.
2. Lift up the washer plain.
3. Lift up the review arm assembly.
4. Remove the review arm spring.

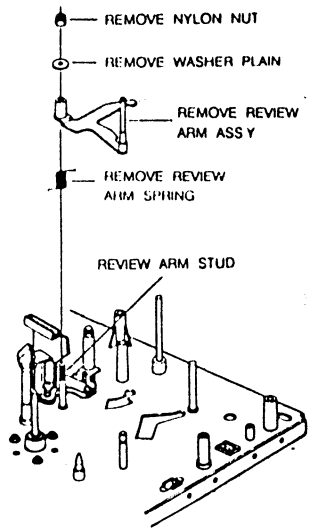


Fig. 55 Review Arm Assembly Removal

2-2-40. Full Erase Head Removal

1. Disconnect the lead connector assembly from the Full Erase Head.
2. Remove the screw holding the Full Erase Head and the main base.
3. Lift up the Full Erase Head.

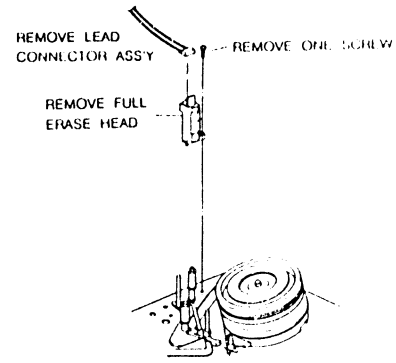


Fig. 56 Full Erase Head Removal

3. MECHANICAL ADJUSTMENT

3-1. MECHANICAL ADJUSTMENT TOOLS

NO	JIG ITEM	CODE NO.	SPECIFICATION	DESCRIPTION	SKETCH NO.
1	TORQUE HEAD GAUGE	68140-100-100	COMMON ; LONG	; Use for torque adjustment of Take up / Supply Reel.	A
2	ALIGNMENT TAPE	68140-100-207 68140-100-208 68140-100-[illegible] 68140-100-[illegible] 68140-100-211	PAL ; SR 1-2 PAL ; SR 2-2 PAL ; SVJ -2 PAL ; SHR 2 -2 PAL ; SHVJ -2	; LION PATTERN ; 6KHz ; COLOUR BAR ; 1KHz ; PROGRAMME (MONO) ; COLOUR BAR (Hi-Fi) ; L-1KHz, R-400Hz ; PROGRAMME (Hi-Fi)	B
3	BACK TENSION CASSETTE TAPE	68140-100-105	COMMON	; Use for back tension adjustment of Supply reel.	C
4	MASTER PLANE AND REEL DISK HEIGHT JIG	68140-110-101	G-10	; Use for height Adjustment of Reel Disk and Deck plate.	D
5	SERVICE JIG KIT	68140-100-301	UPPER DRUM REPLACING JIG	Use for upper drum replacement.	E(A)
			DRIVER HANDLE	Use for connection with each driver.	E(B)
			CAP.ADJ. DRIVER	; Use for CAP nut Adjustment and X-position Adjustment with A/C Head movement.	E(C)
			(+) (-) DRIVER	; Use for screw Adjustment and Audio Azimuth Adjustment.	E(D-G)
			N3 BOX DRIVER	; Use for A/C Head or Roller supply review arm replacement and Tape transport Adjustment.	E(H)
			HEX WRENCH (0.9mm) HEX WRENCH (1.5mm) HEX WRENCH (2.0mm)	; Use for Guide Roller set screw fastening. ; Use for AudioAzimuth Adjustment (Differ from item) ; Use for Drum bush and driver replacement.	E(I)
			CERAMIC DRIVER	; Use for Electrical Adjustment.	E(J)
			HOUSING ASSEMBLING JIG	; Use for Housing Assembly. (Refer to service manual for further information)	E(K)
			TRANSPORT MECHANISM ADJUSTING DRIVER	; Use for height adjustment of Guide Roller for Envelope linearity adjustment.	E(L)

3-3. TAPE TRANSPORT SYSTEM

Note :
The tape transport system has been adjusted precisely in the factory. Alignment is not necessary except for the followings :

* Noises observed on the screen.
* Tape damage.
* Parts replacement in the tape transport system.

3-3-1. Location of tape transport adjustment.
(Adjustment reference)

Lower flange height of tape guide is used as the basic reference for the transport adjustment. To keep height of the tape guide , do not apply excessive force onto the main base to prevent deformation.

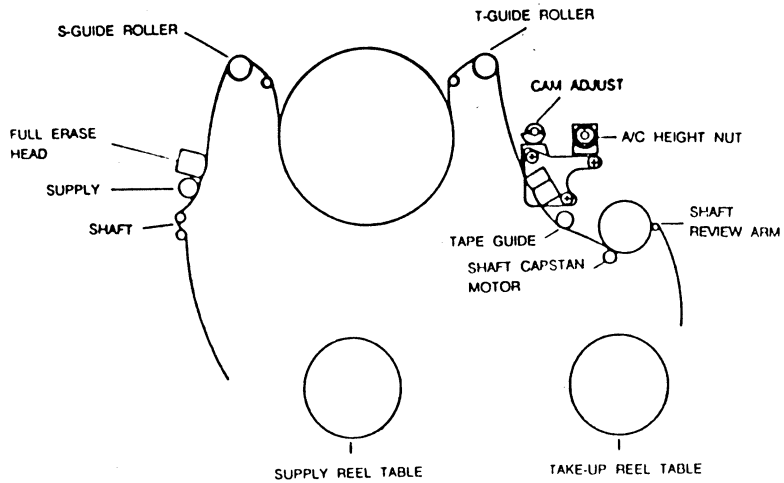


Fig. 1 Location of tape transport adjustment

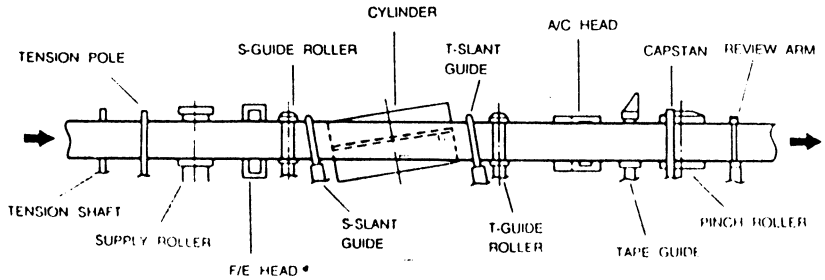
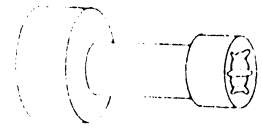
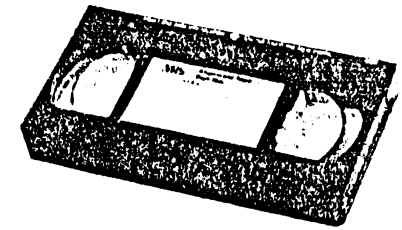


Fig. 2 Tape travel diagram

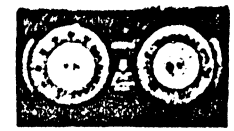
A : TORQUE HEAD GAUGE



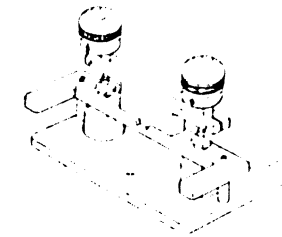
B : ALIGNMENT TAPE



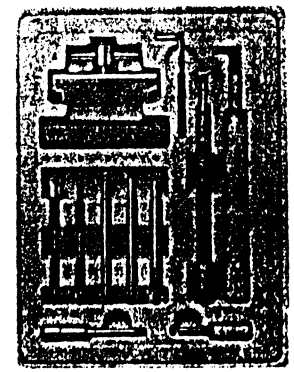
C : BACK TENSION CASSETTE TAPE



D : MASTER PLANE AND REEL DISK HEIGHT JIG



E : SERVICE JIG KIT



(A) UPPER DRUM REPLACING JIG

(B) DRIVER HANDLE

(C) CAP.ADJ.DRIVER

(D-G) (+) (-) DRIVER

(H) N3 BOX DRIVER

(I) HEX WRENCH (0.9mm)
HEX WRENCH (1.5mm)
HEX WRENCH (2.0mm)

(J) CERAMIC DRIVER

(K) HOUSING ASSEMBLING JIG

(L) TRANSPORT MECHANISM ADJUSTING DRIVER

3-3-2. Tape transport system adjustment

1) Pre-adjustment

When the part (s) are replaced, perform required adjustments by referring to procedures for the tape transport system. When the part (s) are replaced, the tape path may be changed.
First run a E-180 tape and make sure excessive tape wrinkle does not occur at each tape guide.

1. If tape wrinkle is observed at the S, T-guide rollers, turn the S, T-guide rollers until wrinkle disappears.
2. If the tape wrinkle is still observed at the tape guide, perform the tilt adjustment of the A/C head.

2) Adjustment procedures

1. A/C Head Assembly Adjustment

a. A/C tilt adjustment

1. Play back a E-180 tape and observe running condition of the tape at the lower flange of tape guide.
2. Adjust the A/C tilt adjusting screw until tape wrinkle is caused at the lower flange of tape guide as shown in Fig.3 (A).
3. Turn the A/C tilt adjusting screw counterclockwise until the tape travels along the lower flange as shown in Fig. 3 (B).

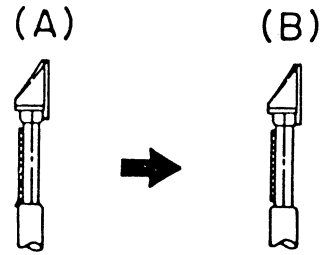


Fig. 3 Tape guide check

b. Audio Azimuth Adjustment

1. Load alignment tape (SR1-2 : 6KHz) and playback the 6KHz signal.
2. Connect channel-1 scope probe to TP501.
3. Adjust screw (B) vertically, to achieve maximum audio level.
4. Adjust screw (C) and hex nut to achieve maximum audio level.

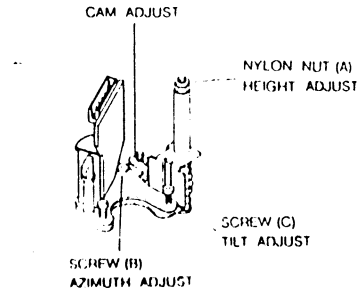


Fig. 4 A/C head assembly

c. Audio head height adjustment

1. Run the alignment tape SR2-2 in the playback mod
2. Observe surface of the audio head using a dental mirror.
3. Turn the A/C height adjusting nut until the gap of lower tape edge and the lower edge of the control head is about 0.25mm shown in Fig. 5.
4. Play back the 1KHz audio signal in the alignment tap and adjust the head height for maximum audio outpu

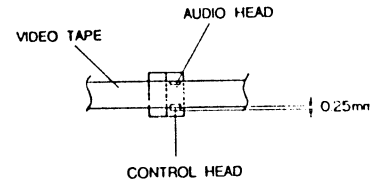


Fig. 5 Head Height

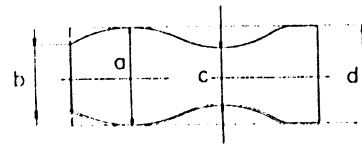
d. A/C Head Position Pre-adjustment

1. Play back the SP mode, video envelope on the SR1 alignment tape.
2. Adjust the CAM adjust for maximum video envelo output make sure the tracking control is set at its center position.

2. Linearity adjustment (S, T-guide rollers adjustme

1. Play back the mode, video envelope on the SR 1-2 alignment tape.
2. Observe the video envelope signal on an oscilloso triggered by the video switching pulse.
3. Make sure the video envelope waveform (in its m num output) meets the specification shown in Fig. 6. If it is not, adjust as follows :

Note :
a = maximum output of the video RF envelope
b = minimum output of the video RF envelope at the entrance side
c = minimum output of the video RF envelope at the center point
d = minimum output of the video RF envelope at the exit side



a b c d
c, b, d / a ≧ 0.63

Fig. 6 Envelope Waveform Adjustment

4. If the section A in Fig. 7 does not meet the specification, adjust the S-guide roller up or down.
5. If the section B in Fig. 7 does not meet the specification, adjust T-guide roller up or down.

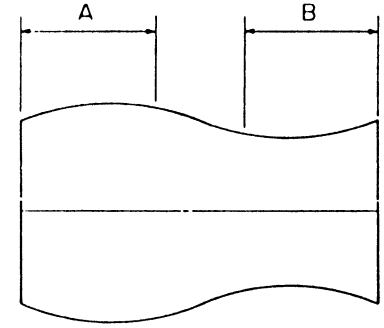


Fig. 7 Adjustment Points

6. After completion of the adjustment (s), vary tracking control from one end to the other and make sure video envelope variations are almost flat.
7. If the envelope varies as shown in Fig. 8 adjustment of the S, T-guide rollers may be upset, so perform the adjustment again.

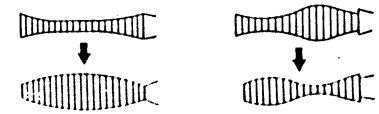


Fig. 8 Abnormal variation of the waveform

3. A/C Head Assembly Fine Adjustment

a. Tape wrinkle check at the lower flange of tape guide.

1. If tape wrinkle is observed at the lower flange of tape guide, adjust the A/C tilt adjusting screw counter clock wise as shown in Fig.3 until the wrinkle disappears.
2. If a gap is observed between the lower flange of tape guide and the lower edge of tape, adjust the A/C tilt adjusting screw clockwise until the tape travels along the lower flange.

Note :
This adjustment should be done using a beginning part of E-180 tape.

b. Azimuth Adjustment

1. Play back the SP mode, 6KHz audio signal on the alignment tape SR1-2.
2. Adjust the A/C azimuth adjusting screw for maximum audio output as shown in Fig. 4.

c. Head height adjustment

1. Play back the alignment tape (SR 2-2) .
2. Adjust the A/C head height adjusting nut for maximum audio output.

d. A/C head position adjustment

1. Play back the mode, white video envelope signal on the alignment tape (SR1-2).
2. Trigger the oscilloscope with the video switching pulse and observe the video envelope waveform.
3. Turn the cam adjust slowly and fix the taper nut at the position where the video envelope reaches a peak level.

4. Review Arm Guide Lever Adjustment

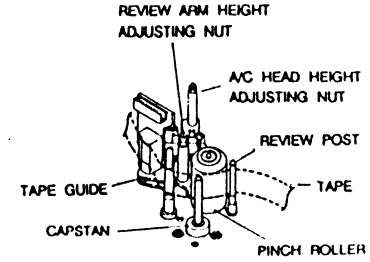


Fig. 9 Review Arm Guide Lever Adjustment

1. Set the VCR to FPS mode with E-180 tape (at beginning portion) loaded. Switch the FPS mode to review mode, after some tape has been wound into T-reel table.

3-2. TAPE TRANSPORT SYSTEM ADJUSTMENT FLOW CHART

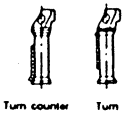
Cylinder assembly replacement
S.T pole base replacement
A/C head assembly replacement
Capstan motor ass'y replacement
Pinch roller ass'y replacement
Cylinder motor replacement
Review arm replacement

S,T guide rollers replacement
Tension level ass'y replacement
FE H'd replacement

Idler clutch assembly replacement
Reel disk replacement
Cam adjustment replacement

1) A/C H'D ass'y adjustment

1. Audio H'D tilt adjustment.
Playback a E-180 tape and adjust lower flange of the review arm for no wrinkle

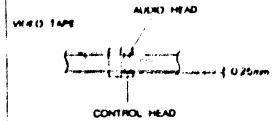


Turn counter clockwise to control

Turn clockwise to control

2. Audio azimuth adjustment
Playback 8KHz audio signal in alignment tape SR 1-2 and adjust for max. output.

3. Audio H'd height adjustment
Set the deck to playmode, and adjust head height until lower head edge matches to lower tape.
Playback 1KHz audio signal in alignment tape SR-1-2 and adjust for max. output



Adjust head height 0.25mm between lower head gauge and lower tape edge.

4. A/C H'd position adjustment
Playback SP mode SR11-1 video signal in alignment tape. Set tracking control at it's center. Adjustment taper nut for max. envelope output

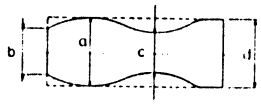
2) Linearity adjustment(S,T guide roller)

1. Maximum envelope output
Playback SP mode monochrome video signal in alignment tape SR1-2. Trigger the scope with switching pulse (A ch). Turn tracking control for maximum envelope output.

2. Entrance side envelope adjustment,
Rotate S guide roller until entrance side envelope becomes as flat as possible.

3. Exit side envelope adjustment
Rotate T-guide roller until exit side envelope become as flat as possible.

4. Linearity check
Turn tracking control clockwise and counter clockwise.
Make sure the envelope in creases or decreases keeping flat response.



a b c d
c, b, d / a ≥ 0.63

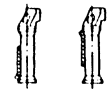
3) A/C assembly fine adjustment

1. Audio azimuth adjustment and height adjustment.
Playback SP mode video signal in alignment tape SR1-2.
Measure 8KHz audio signal output with millivoltmeter.
Adjust azimuth adjusting screw and nut for maximum output.

2. A/C H'd position adjustment
Set tracking control to it's center click position. Playback SP mode white video signal in alignment tape SR11-1 and adjust cam adjustment for maximum envelope output. Playback alignment tape SR11-2 and make sure envelope is still maximum. If envelope is not maximum, adjust envelope in SP mode again

4) Review arm adjustment(REV mode)

1. Tape wrinkle check.
Run E-180 tape in review mode. Make sure tape wrinkle at upper or lower flange of guide tape.



(A) (B)

5) Check transitional operation from Review to Play

Playback programme tape (SP) in Review mode and then change the mode to Play.

Make sure that entrance side envelope changes to envelope for normal Play mode within 3sec.

Steady state is obtained within 3 sec. — YES / NO

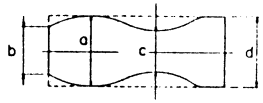
Make sure the gap between lower flange of supply roller and lower tape edge.

Adjust entrance side envelope with S guide roller

Run E-180 tape in Review mode and then change the mode to Play mode. If there are the gap or the wrinkle of tape in lower flange of supply roller replace the pole base 'L'

6) Envelope check (Playing the same VCR used for recording)

Record signals on E-120 and E-180 tapes in SP mode, respectively and playback the signals.



a b c d
c, b, d / a ≥ 0.63

7) Tape wrinkle check

Run E-180 tape in each mode and make sure no wrinkle is caused at each guide.

Play mode	Wrinkle at guide roller	TO 2)
	Wrinkle at guide flange	TO 3)
	Wrinkle at supply roller	TO 5)
Play advance mode	Wrinkle at tape guide flange	TO 2)
Review	Wrinkle at tape guide flange	TO 4)

Return to the item number(s) and perform adjustment again

NOTE : In the linearity adjustment in item 2) the adjusted value should be checked both SP tape.

4 . Reel Disk Height Adjustment

1. Set the jig for reel disk height to the reel disk L,R as shown in Fig.14
2. The needles of L,R should be located within +/-0.05.

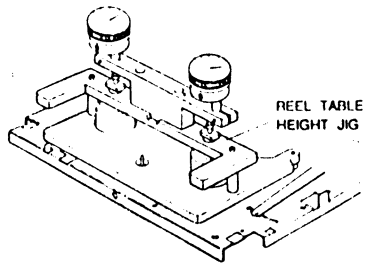


Fig. 14 Reel disk height

4. ELECTRICAL ADJUSTMENTS

4-1. PREPARATION

Electrical adjustments are required after replacing circuit components and certain mechanical parts. It is important to perform these adjustment only after all repairs and replacements have been completed. Also, do not attempt these adjustments unless the proper equipment is available.

4-1-1. Required test equipment

1. Colour television or monitor
2. Oscilloscope: wide-band, dual-trace, triggered delayed sweep.
3. Frequency counter.
4. Audio oscillator.
5. Audio voltmeter.
6. Digital voltmeter.
7. Signal generator : RF/IF sweep/marker.
8. Signal generator : PAL colour bar, 100% White.
9. Recording tape.
10. Alignment tapes : SR2-2, SR1-2.

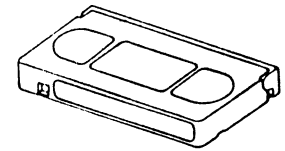


Fig. 1 Tape

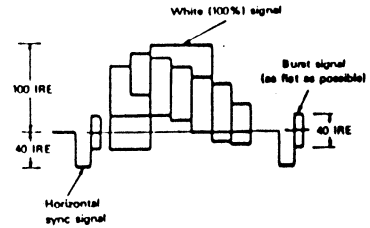


Fig. 2 Color bar signal of pattern generator

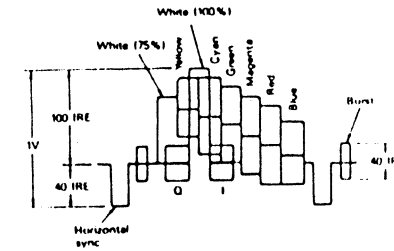


Fig. 3 Color bar signal waveform

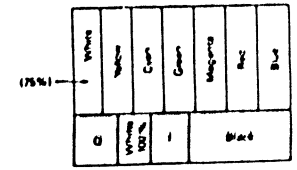


Fig. 4 Color bar pattern

2. Check tape wrinkle at the upper and lower flange of tape guide. Adjust the review arm so that the tape runs along the lower flange.
3. Set the VCR to the FPS mode again and make sure the tape is not twisted between the capstan and the review arm guide.
If it is twisted again, adjust the review arm guide height and the adjustment in step 1.

5. Check For Transitional Operation From Review to Play

Check transition from review mode to play mode, using a pre-recorded tape, make sure the entrance side of envelope comes to an appropriate steady state within 3 seconds, shown in Fig. 10.

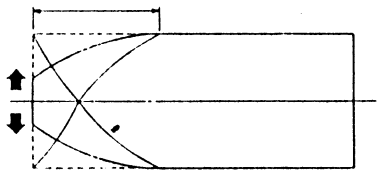


Fig. 10 Video envelope rising when operation mode is switch from review to play mode.

If it does not rise within 3 seconds, adjust as follows :

1. **Make sure there is no gap between supply roller lower flange and tape. There is no adjustment for this.**
2. **Change operation mode from the review to the play** mode again and make sure entrance side of envelope rises within 3 seconds.
3. If the envelope rises up then replace either the lower cylinder or base pole "L" then adjust again.

6. Envelope Check

1. **Make recordings on E-120 and E-180 tapes, and make** sure the playback output envelope meets the specification shown in Fig.11
2. In playback mode using the same video deck as used for the recording, (with a E-120) the video envelope should meet the specification shown in Fig. 11. In mode, (A) should be same as (B). If the difference is excessive then the upper cylinder should be replaced.

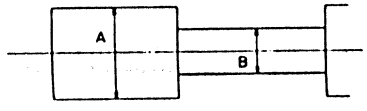


Fig. 11 Envelope output and output level difference

7. Tape Wrinkle Check

1. Run the E-180 tape in the playback, FPS, review and the pause mode and then observe tape wrir at each guide.
2. If excessive tape wrinkle is observed at the mode shown below, perform the associated adjustment shown below.

a. Playback mode

Tape wrinkle at the S, T-guide roller section : Line adjustment. (S, T Guide Rollers Adjustment)
Tape wrinkle at tape guide flange : A/C head asser adjustment.

b. Review mode

Tape wrinkle at tape guide : "Review arm guide le adjustment.

3-4. REEL TORQUE

3-4-1. General Features.

1. The rotation of the capstan motor operates the a clutch through the belt capstan motor which is di ly connected to the assembly clutch.
2. Brake operation and shift operation in FF/REW one slide way.
3. Transportaion of accurate driving force by gear type (clutch ass'y).
4. Auto Torque is converted by CAM system autom cally.

MODE	TORQUE g/cm	GAUGE
PB/REC	60 - 130	Cassette Torquem
RPS	140 - 200	Cassette Torquem
FF/REW	Above 1000g/cm	Torque Gauge

Note :
If the Spec is out of above, replace the clutch ass'y ; check it.

3-4-2. Location of Tension Pole and Back Tension Adjustment

1. Remove the housing ass'y and set the deck to play mode.
2. Adjust the cam tension to set at 0.5 + /- 0.2 from the center of supply roller.
3. The back tension meter should be used for adjustment of back tension.

Check back tension, should be 42 + /- 10 g.cm.
If not, check while adjusting cam tension.

Counter-Clock wise : Torque UP
Clock wise : Torque DOWN

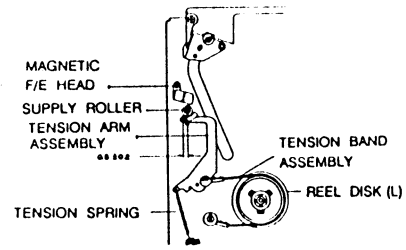


Fig. 12 Tension Pole and Back Tension Adjustment

3-4-3. Reel Torque Adjustment

1. Reel torque adjustment

a. Review mode

Excessive torque may damage the tape, however poor torque may not wind the tape.

b. REC/PLAY BACK (Take -Up) Mode

Weak torque can not wind the tape to the end, however excessive torque may make the tape expand.

BACK TENSION METER

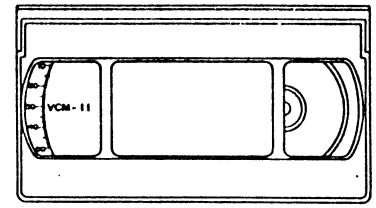


Fig. 13 Back Tension Tape Torque Cassette

c. Inspection

Rewind the torque cassette which is recorded in SP mode to the end and measure the torque shown below.
Rewind Torque : 140 - 200 g.cm
Record/Play Back Torque : 60 - 130 g.cm

2. Reel Torque Check

a. First, record a TV broadcast program on the entire torque cassette tape (KT-300NR) in the SP mode.
b. Load the torque cassette in the VCR and fast forward the tape before proceeding with measurement.
c. Set the VCR to the REVIEW mode and feed the tape for about 15 sec., and then make sure the take-up torque of 140 -190g-cm is obtained while observing the left torque meter.
d. After completion of step 3, set the VCR to the PLAY mode and feed the tape for about 30 sec.
Read the right torque meter and check whether the torque of 60-130g.cm is obtained.
e. When the review torque and playback torque are out of limit, replace the clutch assembly.
f. When the clutch assembly is replaced, perform the reel torque check.

3. Precautions for Usage of Torque Cassette (KT-300NR)

a. Before loading a torque cassette in a VCR, always remove tape slack. The tape slack can be removed by rotating the reel to its take-up direction. (The tape tends to slack when there is no reel brake actions).
b. When the torque cassette is loaded, confirm the following:
b-1. Make sure the tape does not ride up or over the tape guide cap. If it does, do not eject the tape but bring the tape to its correct position, taking care not to damage the tape.
b-2. Make sure the tape has no slack, if it has slack, operate the VCR in FF or REW mode and then stop the tape. Then make sure the tape has no slack.
b-3. After above confirmation, proceed to the reel torque adjustments and confirmation.
c. Cautions for removal of torque cassette.
c-1. When removing the torque cassette from the VCR, set the VCR to the STOP mode and wait for several seconds. Then, make sure the tape has no slack. Push the EJECT button to remove the cassette.
c-2. When removing the torque cassette from the VCR, also make sure the tape has no slack inside the cassette lid before pulling the cassette from the VCR. If the tape has no slack inside the lid, carefully bring the tape in place and then pull the cassette.
d. If the previous precautions 1,2 and 3 are not performed properly, the tape may be damaged and correct measurements can not be performed.
e. Do not use worn out or damaged tape, if they are used they may damage video heads on the cylinder. In such a case, always replace the tape with a new one.

4-1-2. Alignment tape contents

Tape	Video signal	Audio signal	Applications
SR2-2 (SP)	Colour bars	1 KHz	* Video signal playback circuit checks and adjustments * Audio signal playback circuit checks and adjustments
SR1-2 (SP)	Monochrome	6 KHz	* Interchangeability checks and adjustments * SERVO circuit check and adjustments * Audio head Azimuth adjustments

4-1-3. Check and adjustment steps

The check and adjustment steps are provided in the following in the form of charts. For clarity, the nomenclature used in the charts is outlined below.

No.	Checks and adjustments are numbered in the recommended sequence in which they are to be performed.
Item	Name assigned to the particular check and adjustment steps.
Check Point	Location to which measuring instrument (oscilloscope unless otherwise noted) is to be connected
Adjustment Parts	Variable component (resistor capacitor, etc.) to be adjusted in this step.
Signal	Input signal required to perform adjustment.
Mode	Equipment operating mode at time of check of adjustment.
100% White	100% White signal as video input.
Color bar	Colour bar signal as video input
1KHz	Supply a 1KHz sinewave as audio input signal.
STOP	Power on and machine in stop mode.
REC	Recording mode.
PB	Playback mode.
SR2-2	Playback SR2-2 alignment tape
SR1-2	Playback SR1-2 alignment tape
STILL	Playback then pause
Description and Waveform	This column provides an explanation of the step, notes, adjustment values and waveform diagram
MAIN	Main PCB (VIDEO, TUNER, SERVO, AUDIO, SYSTEM CONTROL)
P.A	PRE-AMP PCB
F/T	Function/Timer PCB

-2. SERVO SECTION In Main. PCB

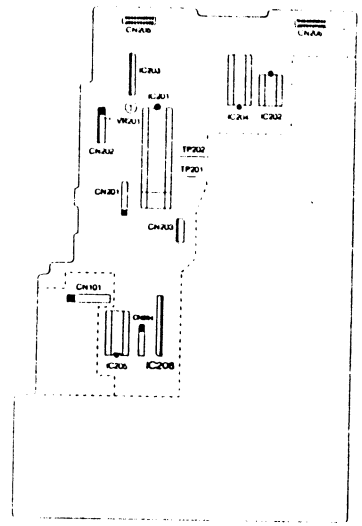


Fig. 5 Servo Section in Main Component Side

4-2-1. Switching Point Adjustment

Equipment : Oscilloscope
Test Points : TP3202 (Video Output Signal)
TP202 (H'd SW 25Hz)
Adjust : VR201

The pulse generator (PG) shifter determines the video head switching point during playback. Misadjustment of the PG shifter may cause head switching noise and/or vertical jitter in the picture.

1. Load the instrument with an alignment tape and playback the colour bar signal or monochrome signal. (Alignment tape SR2-2)
2. Connect channel-1 scope probe (1V/div.50us/div.) to TP202. Trigger the scope on channel-1.
3. Connect channel-2 scope probe (1V/div) to TP3202.
4. Set the scope to (+) slope and adjust the (VR201) so that the trailing edge of the SW 25Hz pulse is placed 6.5H +/- 0.5H (horizontal) lines before the start of vertical sync pulse in Fig. 6

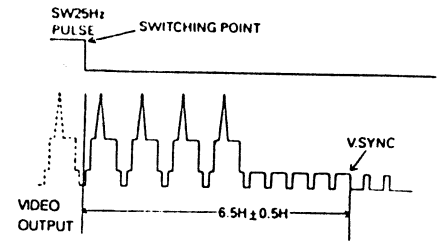


Fig. 6 Head Switching Point Adjustment

4-3. LUMA/CHROMA SECTION In Main. PCB

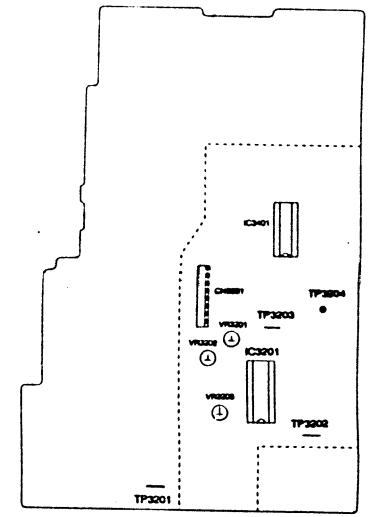


Fig. 7 LUMA/CHROMA Section in Main Component Side

4-3-1. CCD IN (CLAMP) Level Adjustment

Equipment : Oscilloscope
Test Point : IC3201 Pin 10 (CCD Video Level)
Adjust : VR3203 (CCD Level Control)

This adjustment is for the compensation of the Drop out. When there is the Drop out , the CCD output level is very low and black trigger occurs. If the level is very high, white trigger occurs.

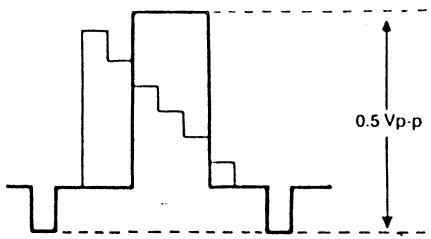


Fig. 8 CCD IN Level Adjustment

1. Connect channel-1 scope probe (0.1V/div) to IC3201 Pin 10.
2. Load the instrument with an alignment tape and play back the color bar signal. (Alignment Tape SR2-2)
3. Adjust the CCD Level Control (VR3203) for 0.5Vp-p.

4-3-2. FM Carrier & Deviation Adjustment

Equipment : Tracking Scope
Test Point : TP3204
Adjust : VR3201 (Deviation)
VR3202 (FM Carrier)

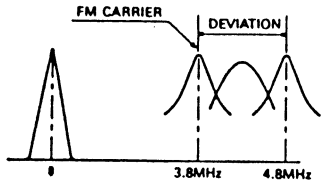


Fig. 9 FM Carrier & Deviation Adjustment

This adjustment sets the frequency of the FM Carrier and Deviation. If deviation is less than 1MHz, the video output level becomes low. When the deviation is more than 1MHz, the output level becomes high and there will be the overmodulation. So the screen has white/dark trigger and the S/N ratio is not good.

1. Apply 100% white signal to the video input jack on the rear panel.
2. Rotate the input selected S/W to AUX.
3. Connect tracking scope to TP3204.
4. Load blank tape and make a recording.
5. Adjust the FM carrier control (VR3202) so that the frequency is 3.8MHz +/- 0.1 MHz.

6. Adjust the deviation control (VR3201) so that the frequency is 4.8MHz +/- 0.1MHz for the 1MHz deviation (See Fig.9)

4-4. TUNER/DEMODULATOR SECTION In Main . PCB

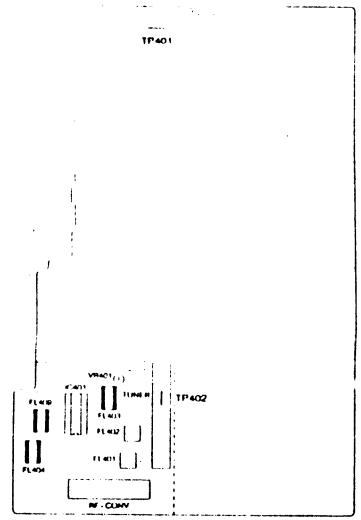


Fig. 10 Tuner/Demodulator Section in Main .PCB Component Side.

4-4-1. TRAP Adjustment (VX Model)

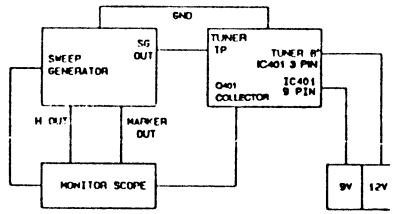


Fig. 11 Composition for TRAP Adjustment

Equipment : Sweep Generator
Test Point : Q401 Collector (IF OUT)
Adjust : FL401 , FL402 (TRAP)

1. Place the instrument in E-E mode.
2. Remove connector CN101 and connect DC bias supply of 12V to the pin B + Tuner on the Main PCB.
3. Connect the sweep generator output to tuner TP within the tuner unit . (Fig. 11)
4. Connect input of monitor scope to the collector of Q401.
5. Adjust the trap (FL 401, 402) in the tuner unit shown in Fig. 12.

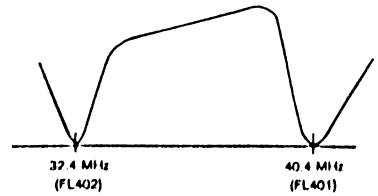


Fig. 12 TRAP Adjustment

4-4-2. VIF Adjustment

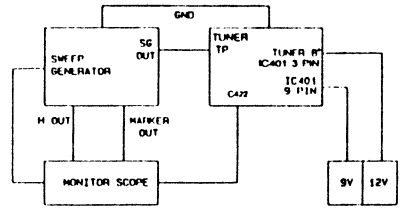


Fig. 13 Composition for VIF Adjustmnet

Equipment : Sweep Generator, Monitorscope
Test Point : C422 (Video output)
Adjust : FL 404 (VIF-DET TANK)

This adjustment makes the sync detector reference signal tuning circuit of the picture-IF circuit resonates with 38.9MHz (39.5 MHz).

1. Place the instrument in the E-E mode.
2. Remove connector CN101 and connect DC bias supply of 9V, 12V to the pin B +, pin 9 of IC401 on the Main PCB.
3. Connect sweep generator output to tuner TP within the tuner unit . (Fig. 13)
4. Connect monitor scope input to C422 .
5. Connect 100 ohm damping resistor between the Pin 12 and pin 13 of IC401.
6. Adjust the core (FL403) in the tuner section shown in Fig. 14
7. Remove 100 ohm damping resistor.
8. Adjust the VIF control (FL404) for maximum. (Fig.15)

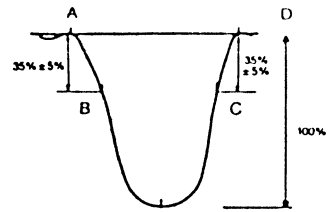


Fig. 14 Illustration for balance between VIF and colour signal (Refer to table 1)

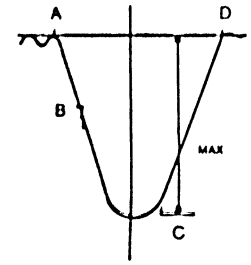


Fig. 15 VIF Maximum Detection (Refer to table 1)

4-4-3. AFT Adjustment

Equipment : Sweep Generator ,Monitorscope
Test Point : TP401 (AFT Output)
Adjust : FL409 (AFT-BAL)

1. After adjustment of VIF, connect monitorscope input to TP401.
2. Adjust the AFT-BAL (FL409) shown in Fig. 16.

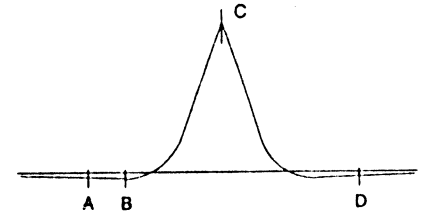


Fig. 16 AFT Adjustment (Refer to table 1)

(MHz)

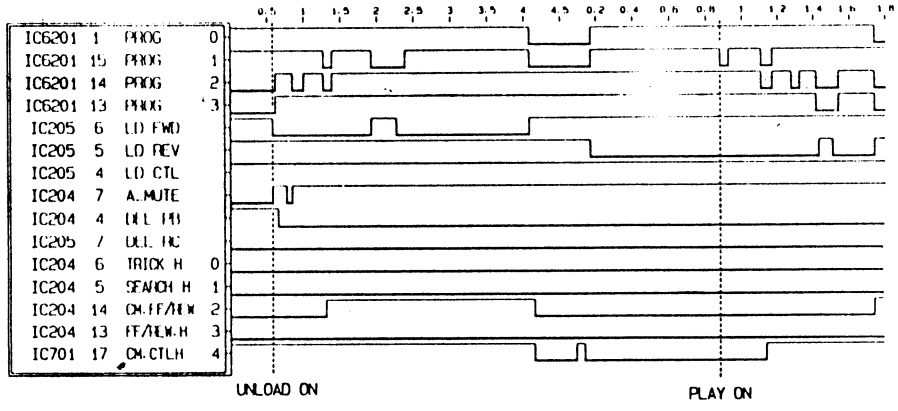
Application Model	A	B	C	D
VX Model	33.4	34.47	38.9	40.4
VI Model	33.5	35.07	39.5	41.5

* Table 1 : Adjusting Frequency

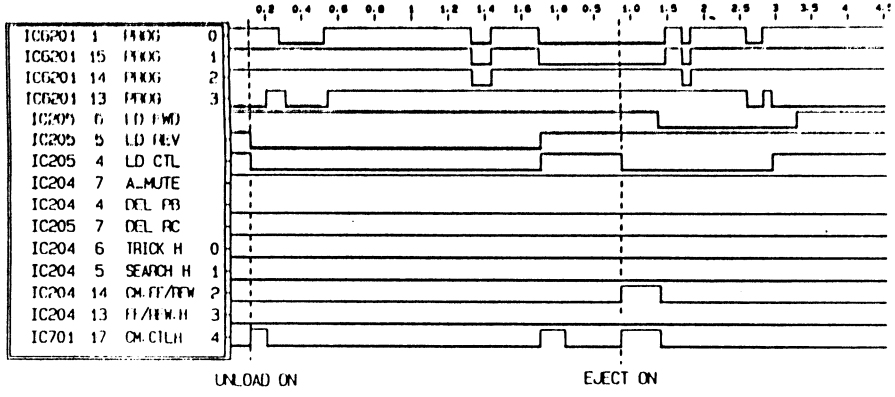
5. TIMING CHART/TROUBLESHOOTING GUIDE

5-1. TIMING CHART

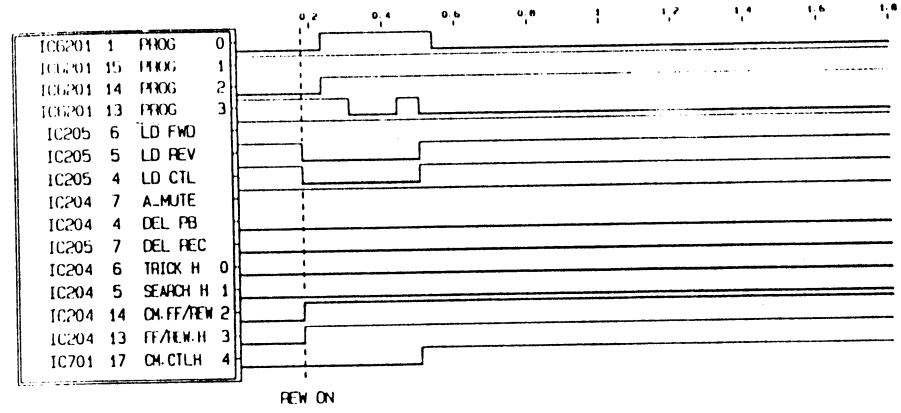
5-1-1. PLAY/UNLOAD/PLAY



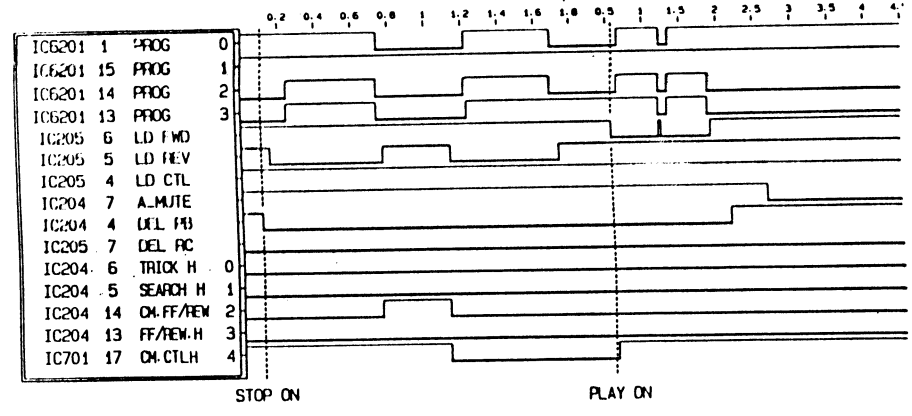
5-1-2. EJECT/UNLOAD/EJECT



5-1-3. STOP/REW



5-1-4. PLAY/STOP/PLAY



4-4-4. RF AGC Adjustment

Equipment : TV Channel Signal Generator
Oscilloscope or DC Voltmeter
Test Point : TP402 (Tuner RF AGC Input)
Adjust : VR401 (RF AGC Control)

This adjustment determines the point where the AGC is activated.

1. Apply a PAL colour bar signal to the video input terminal of the TV channel signal generator. (Fig. 17)
2. Set channel selector to A.
3. Apply the output of the generator to the RF IN terminal on the rear panel. Using the attenuator, adjust the point signal level for 70dBu measured at the RF IN Terminator. (Fig. 17)
4. Connect channel-1 scope probe (1V/div) to TP402.
5. Turn the VCR power on and select TV mode with input select key on the front pannel.
6. Set the channel on the front panel to CH2 (CH21).
7. Adjust the RF AGC control (VR401) for B. (Refer to table 2)
8. Adjust the input level of the RF IN terminal for 60dBu, check the condition of screen. If the display is noisey adjust VR401 so that the noise disappears.
9. Adjust the input level of the RF IN terminal for 100dBu, then check the condition of screen. If the picture is unstable adjust VR401 until the instability is removed.

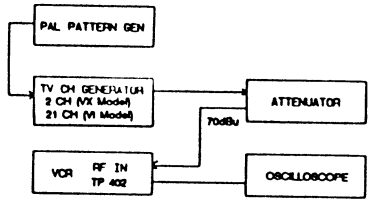


Fig. 17 RF AGC Adjustment

Application Model	A (CH, Frequency)	B (Voltage)
VX Model	2CH (48.25MHz)	5.0 +/- 0.1V
VI Model	21CH (471.25MHz)	5.2 +/- 0.1V

* Table 2

4-5. AUDIO SECTION In Main. PCB

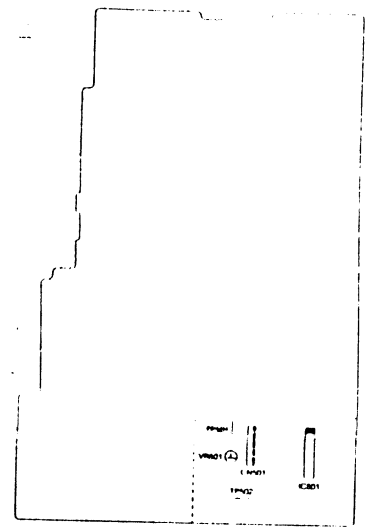


Fig. 18 Audio Section in Main Component Side

4-5-1. Audio Bias Level Adjustment

Equipment : AC Millivoltmeter
Test Point : TP1, TP2 (in A/C Head)
Adjust : VR501 (REC Bias Level ADJ)

When the audio record bias is too low, high frequencies are increased resulting in distortion.
When the level is too high, high frequencies are attenuated.

1. Load blank tape and place in the SP record mode with no signal.
2. Connect the A/C Voltmeter to TP1, TP2 in A/C head.
3. Adjust the audio bias level control (VR501) for 2.4 mVrms.

-6. LP SKEW SECTION

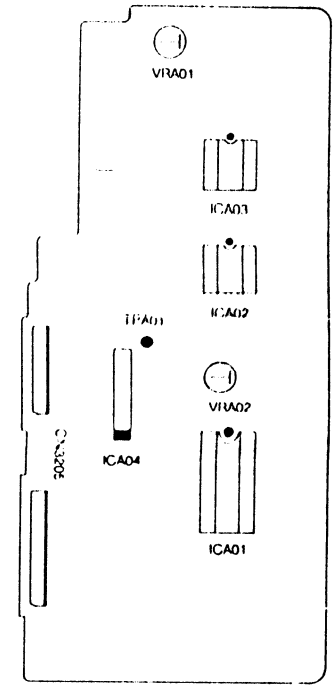


Fig. 19 LP SKEW Section Component Side

4-6-1. LP SKEW Adjustment

Equipment : Oscilloscope
Test Point : TP 202 (SW 25Hz) Main PCB
TPA01 (Jumping Pulse) LP SKEW PCB
TP 3202 (Video Out) Main PCB
Adjust : VRA01 (SKEW Video Level) LP SKEW PCB
VRA02 (Jumping Pulse) LP SKEW PCB

1. Load a blank tape and record color bar signal in LP mode then playback it.
2. Connect CH3 scope probe to TP202, CH2 scope probe to TPA01, CH1 scope probe to TP3202.
3. Trigger the scope on CH3. (1V/div, 50us/div)
4. Set the scope to (+) slope and adjust VRA01 in still mode to equalize the levels.
5. Set the scope to (+) slope and adjust VRA02 so that Jumping pulse is high or low in still mode and is 25Hz in X2 play mode.
6. Confirm the screen shaking is minimized in still and X2 play modes.
Check skew compensation condition in FPS and RPS.

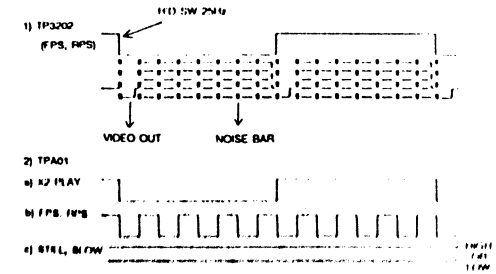
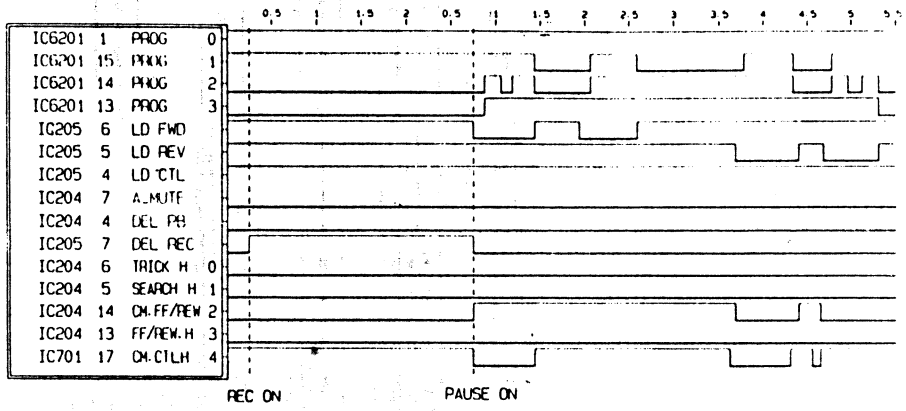
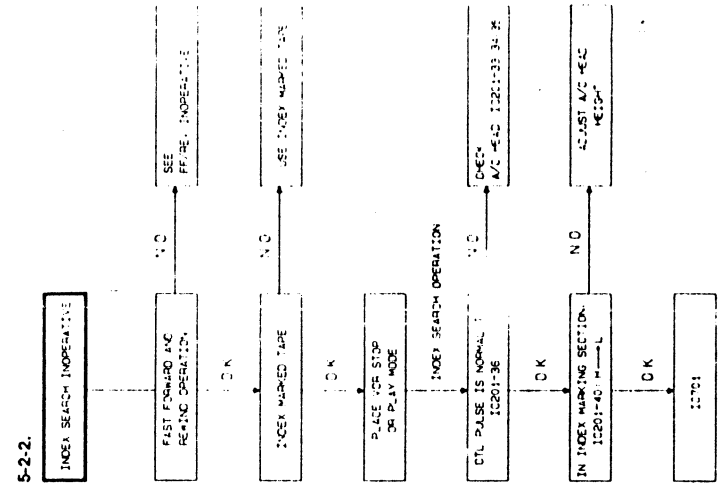


Fig.20 LP SKEW Adjustment

5-1-9. PAUSE/REC/PAUSE

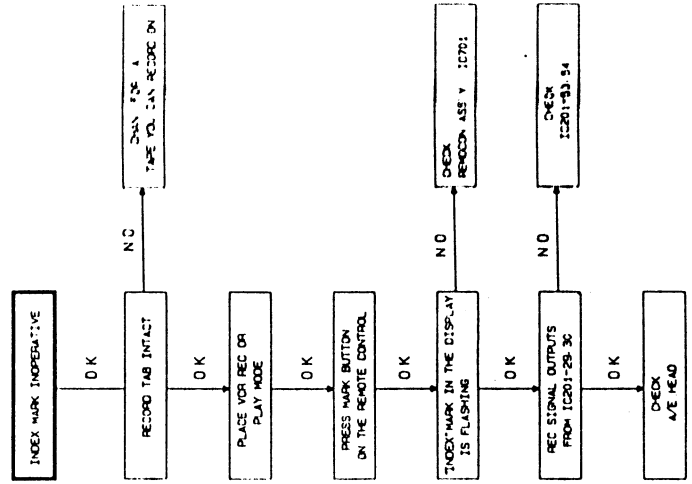


5-2-2.

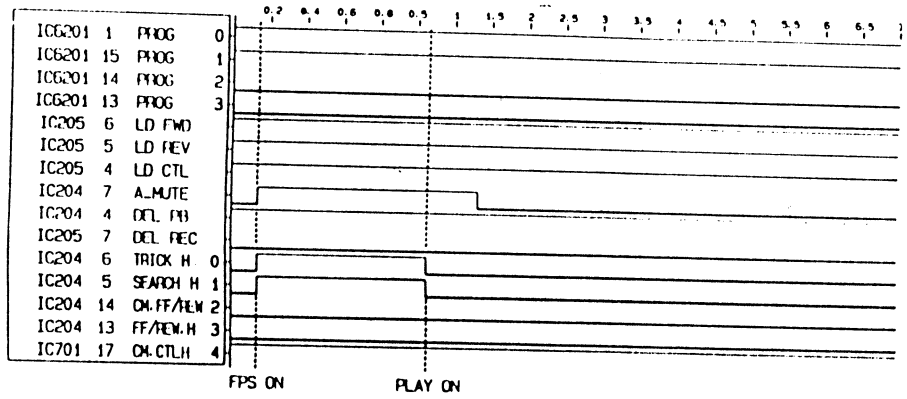


5-2. TROUBLESHOOTING GUIDE

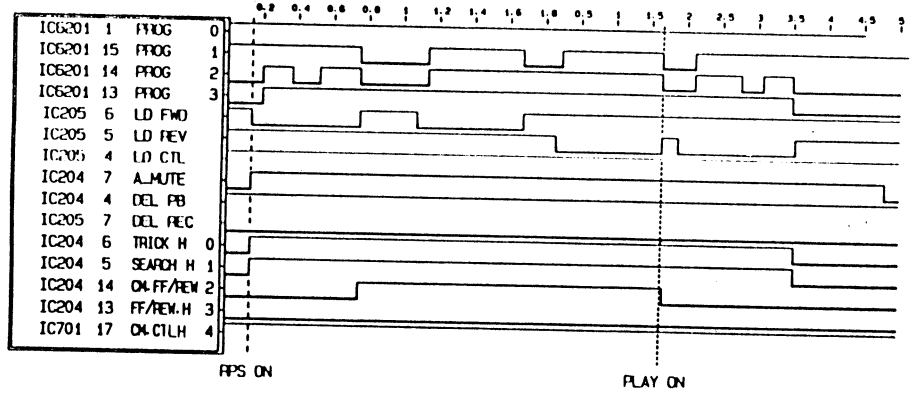
5-2-1.


INDEX MARK INOPERATIVE
RECORD TAB INTACT
PLACE VCR REC OR PLAY MODE
PRESS MARK BUTTON ON THE REMOTE CONTROL
INDEX MARK IN THE DISPLAY IS FLASHING
REC SIGNAL OUTPUTS FROM IC201-29 30
CHECK A/E HEAD
CHECK REMOCON ASS'Y IC701
CHECK IC201-29 30
O K
N O

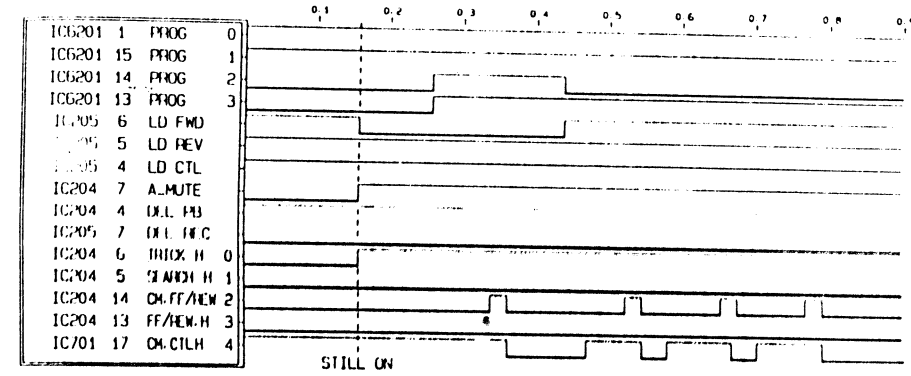
5-1-5. PLAY/FPS/PLAY



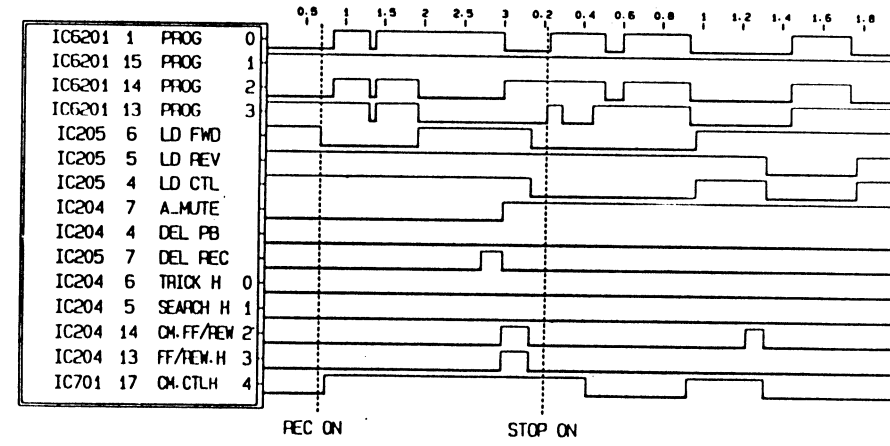
5-1-6. PLAY/RPS/PLAY



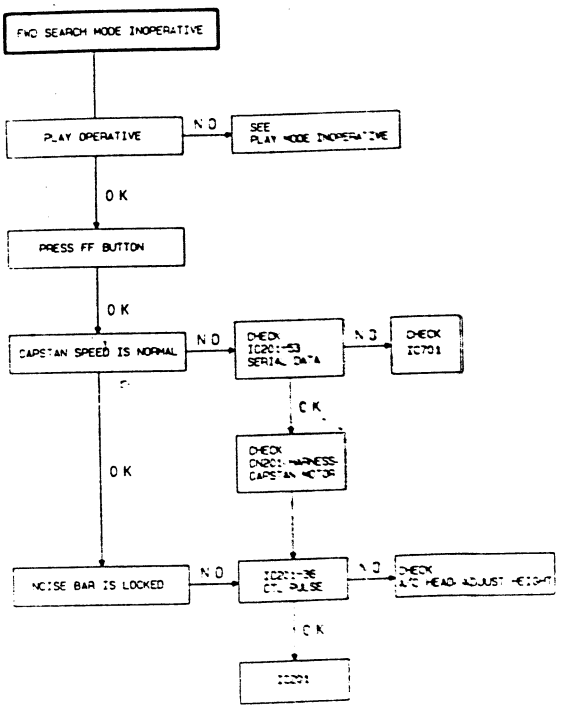
5-1-7. PLAY/STILL



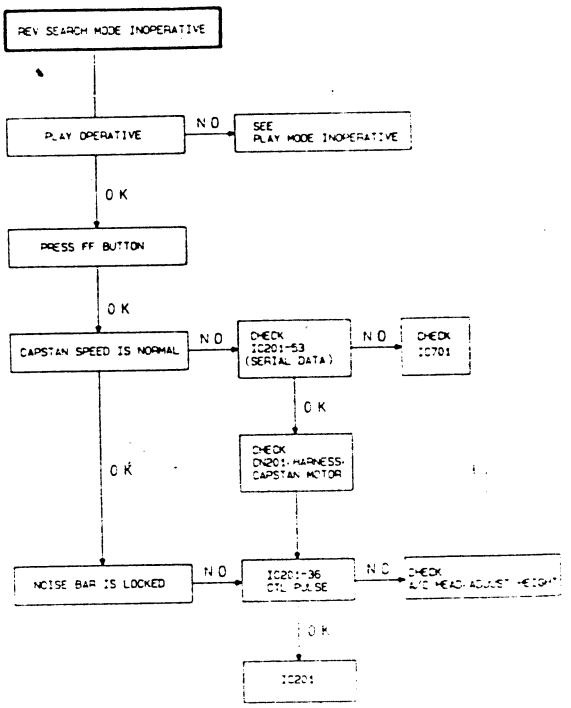
5-1-8. STOP/REC/STOP



5-2-7.

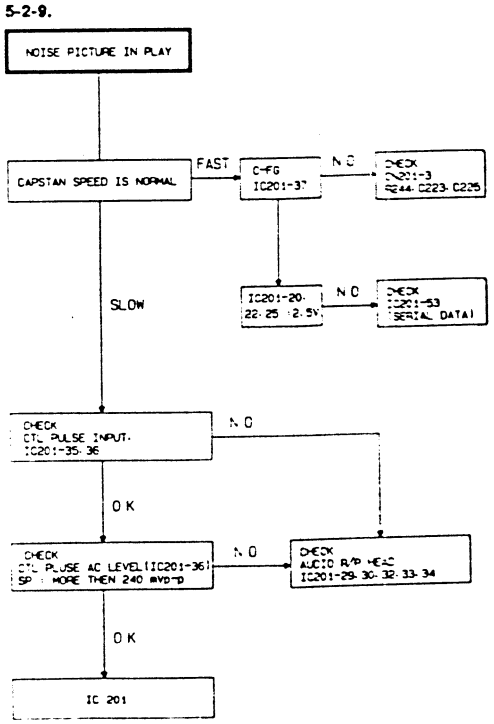


5-2-8.



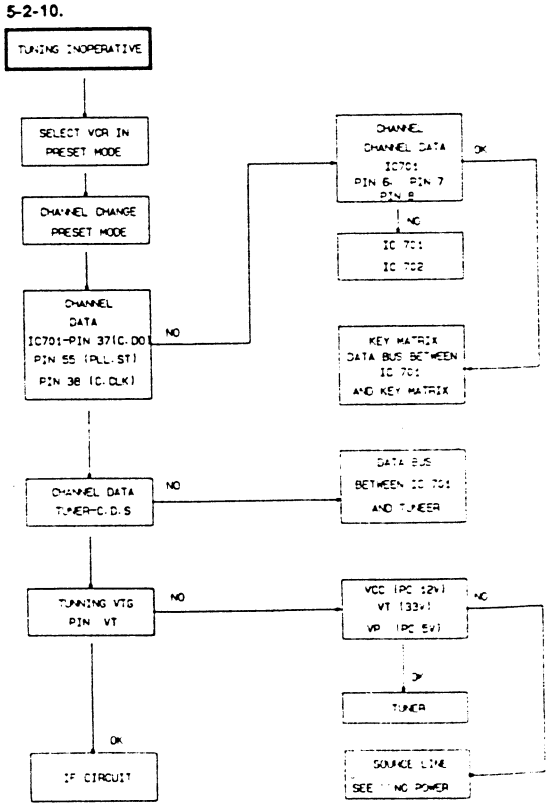
5-9

5-2-9.

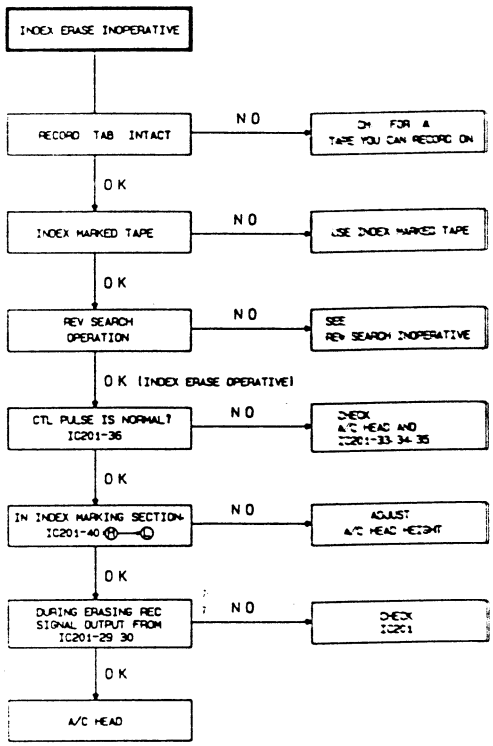


5-10

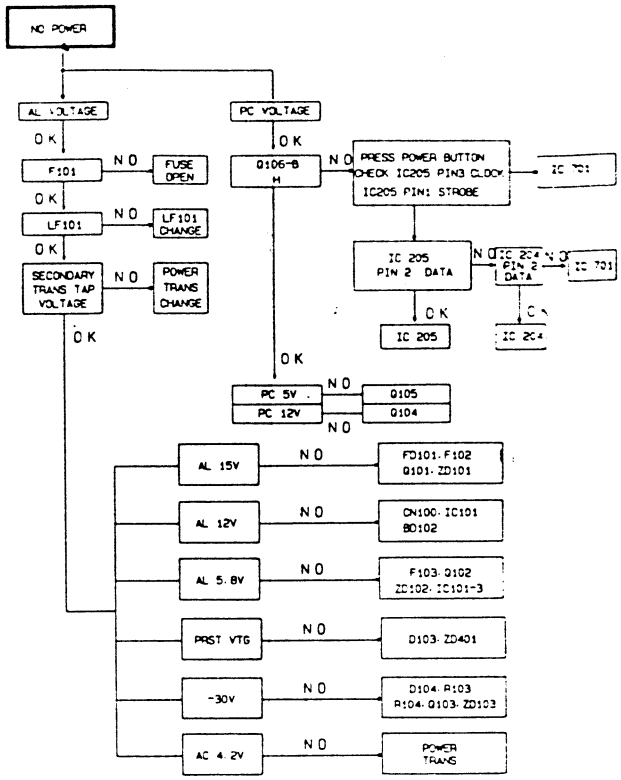
5-2-10.


TUNING INOPERATIVE
SELECT VCR IN PRESET MODE
CHANNEL CHANGE PRESET MODE
CHANNEL DATA IC701-PIN 37 (C.DO) PIN 55 (PLL-ST) PIN 38 (C-CLK)
NO
CHANNEL CHANNEL DATA IC701 PIN 6- PIN 7 PIN 8
OK
NO
IC 701 IC 702
KEY MATRIX DATA BUS BETWEEN IC 701 AND KEY MATRIX
CHANNEL DATA TUNER-C.D.S
NO
DATA BUS BETWEEN IC 701 AND TUNER
TUNING VTG PIN VT
NO
VCC (PC 12V) VT (33V) VP (PC 5V)
NO
TUNER
OK
IF CIRCUIT
SOURCE LINE SEE NO POWER

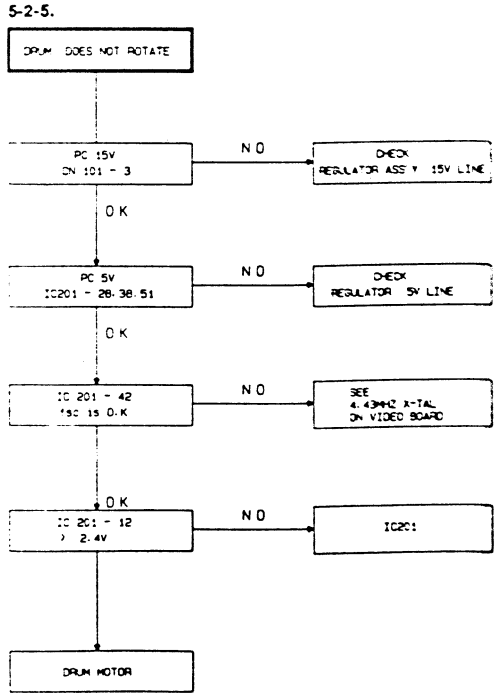
5-2-3.



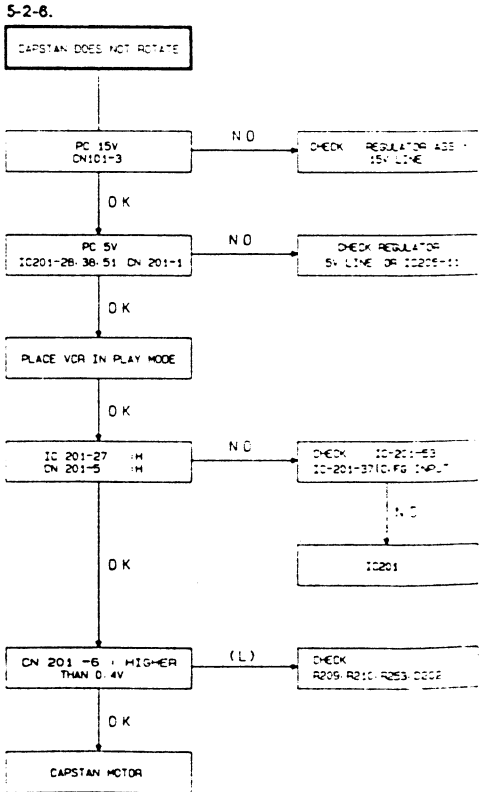
5-2-4.



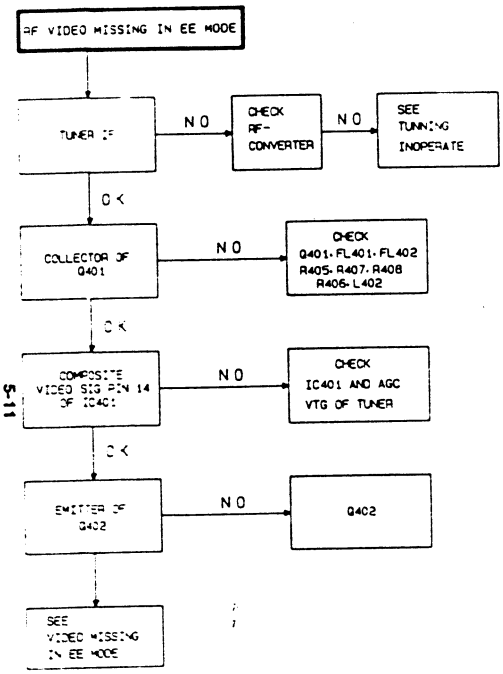
5-2-5.



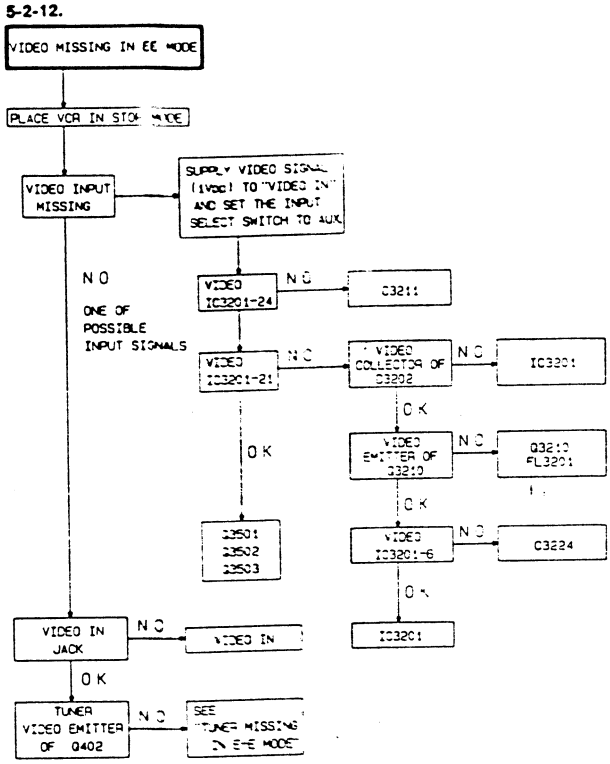
5-2-6.



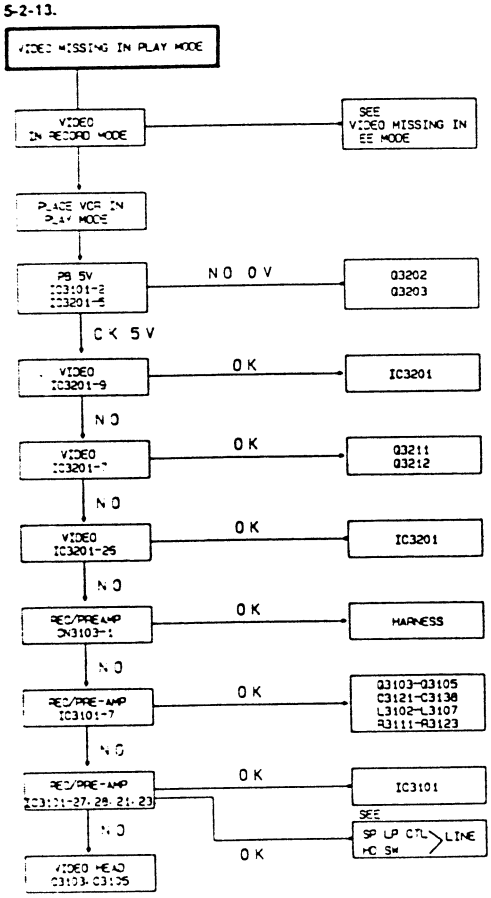
5-2-11.



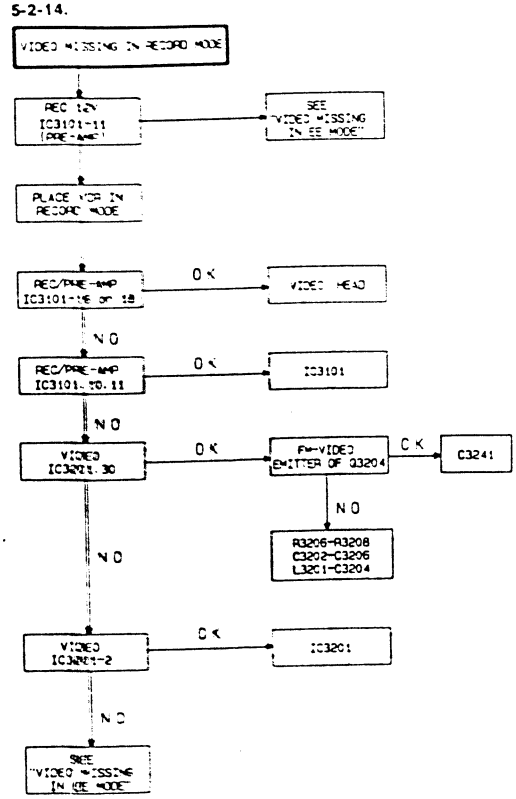
5-2-12.



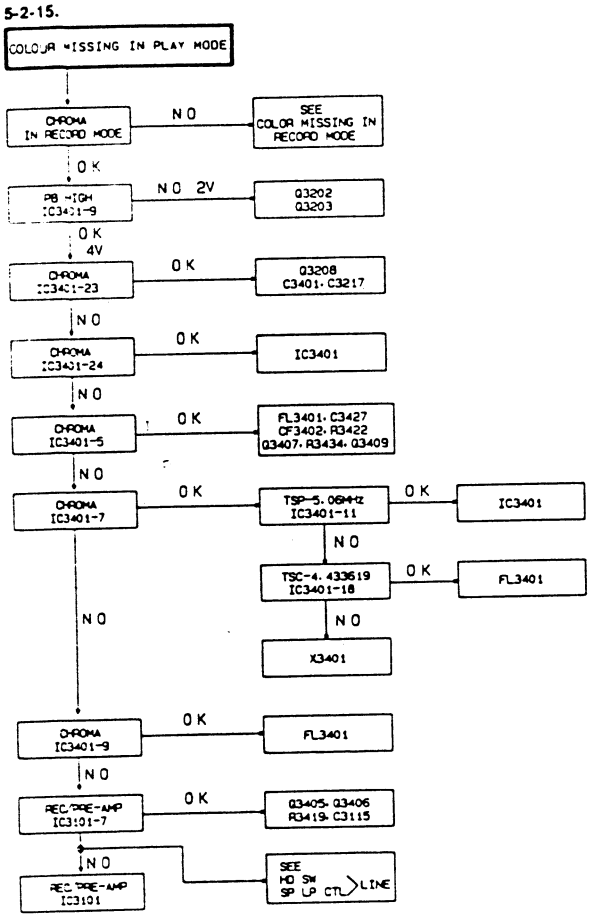
5-2-13.



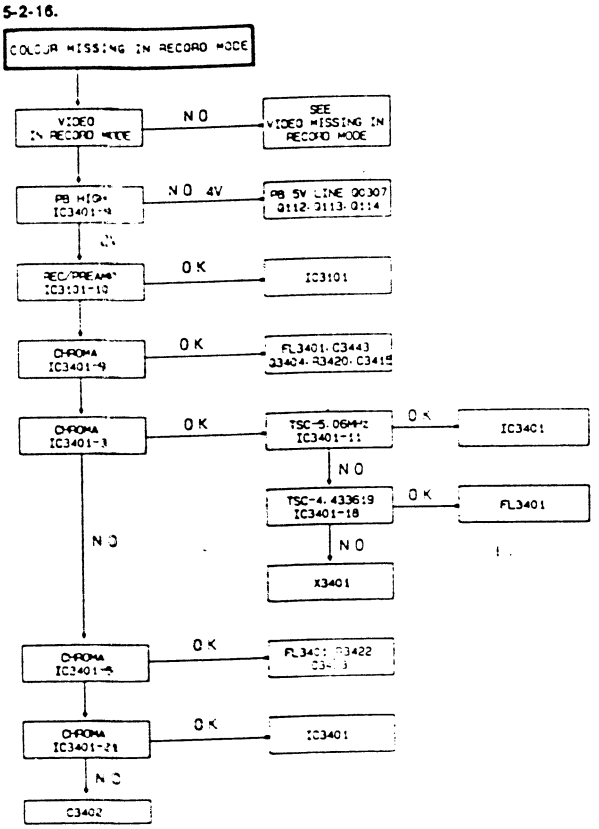
5-2-14.



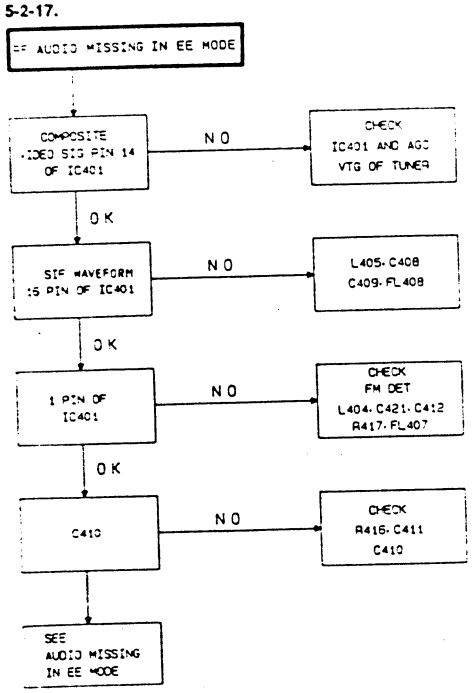
5-2-15.



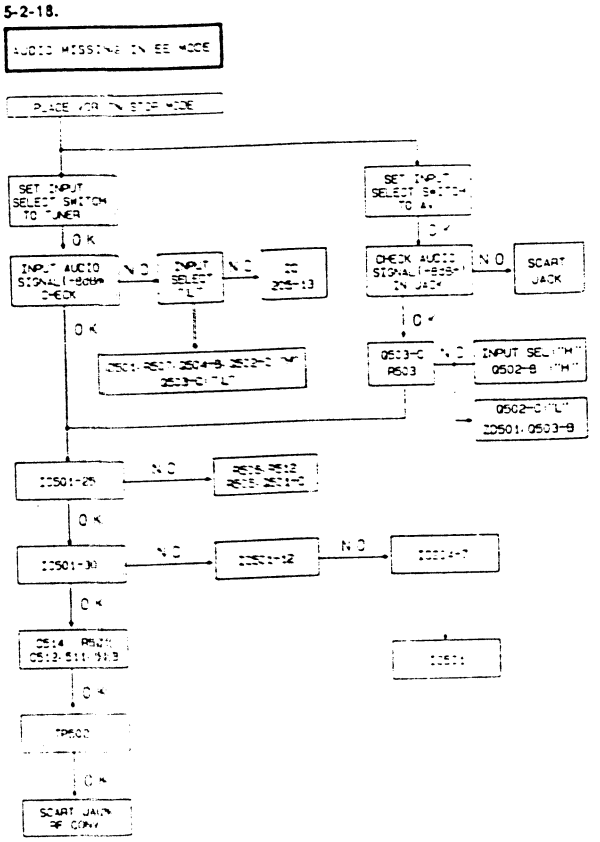
5-2-16.



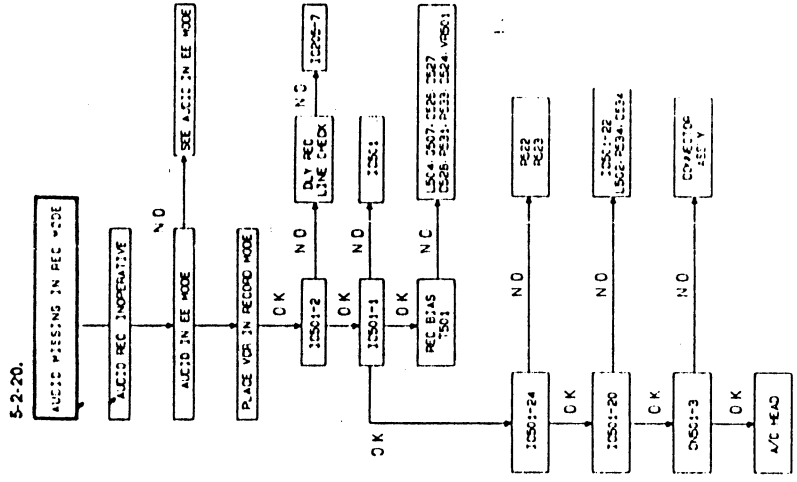
5-2-17.



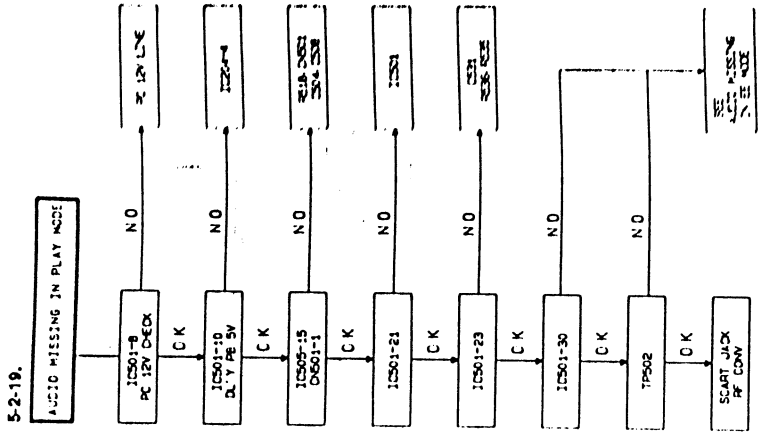
5-2-18.



5-2-20.



5-2-19.



6. REPLACEMENT PARTS LIST

1. Parts Replacement

Many electrical and mechanical parts in video cassette recorder(player) have special safety-related characteristics. These are after not evident from visual inspection nor the protection afforded by them necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in this manual ; electrical components having such features are identified by ⚠ in the replacement parts lists and schematic diagrams.
The use of a substitute replacement part which does not have the same safety characteristics as the factory recommanded replacement parts shown in this service manual may create shock, fire or other hazard.

2. Unless otherwise specified :

1) All resistors are in ohms (Ω)
- K = 1,000
- M = 1,000K

• RD : 1/8W, +/- 5% Carbon

• RM : 1/4W, +/- 5% Metal-film

2) All capacitors are in +/- 10%, MF = uF.

• CC : PP = uuF, Ceramic, Temp

• CK : PK = uuF, Ceramic, MK

• CS : Tantalium

• CQ : Polyester

• CE : Electrolytic

3) All coils are in microhenries (uH), M = 1,000uH.

3. ASS'Y = Assembly.

4. P . W . B = Printed Wiring Board.

5. ⚠ Mark : Safety related parts.

6. How to order replacement parts

To have your order filed promptly and correctly, please furnish the following informations.

1) Model Number

2) Location Number

3) Part Number

4) Description & Specification

7. P . W . B Assembly Is not Replacement Item.

6-1. MECHANICAL PARTS LIST

LOCA.NO	PART-NUMBER	DESCRIPTION;SPECIFICATION	REMARK
		INSTRUMENT ASSEMBLY	
1	69000-193-009	ASS'Y-PANEL FRONT ; VX-1561	
1-1	69000-183-068	ASS'Y-PANEL FRONT ; VX/VI-1560	
2	67642-603-806	DOOR HOUSING ; VX-1561	
2-1	67642-605-510	DOOR HOUSING ; VX/VI-1560	
50	67643-504-520	DOOR FRONT ; VX-1561	
50-1	67643-505-410	DOOR FRONT ; VX/VI-1560	
122	69095-600-966	REGULATOR ASS'Y ; VX-1260/SEG	
130	66020-602-310	FRAME	
131	66462-605-510	CONNECTOR-BOARD; HIPS S4MB	
132	66612-604-710	BOTTOM COVER ; SPG T0.5	
133	66074-600-110	LEG ; CE M40-70 860-30 (BLK)	
137	69057-603-204	ASS'Y MAIN ; X1 PAL VX-1560/1561	
	69057-603-205	ASS'Y MAIN ; X1 PAL VI-1560(WITH OSD)	
143	66614-714-310	BRKT-GUIDE TOP S ; SPG T1.0	
163	66002-603-510	TOP CABINET; HISH T0.85 BLK(VX-1561)	
	66002-603-530	TOP CABINET; HISH T0.85 BLK(VX/VI-1560)	
190	67158-240-121	SCREW BH; 2-4X12 FE FZY	
193	67158-240-163	SCREW-TAP BH; 2-4X16 FE FZB	
200	DX1-PR4	FULL DECK ASS'Y; X-1	
205	69071-601-201	ASS'Y F/TIMER ; X1 PAL VX-1561	
205-1	69071-603-208	ASS'Y F/TIMER ; X1 PAL VI-1560	
	69071-601-203	ASS'Y F/TIMER ; X1 PAL VX-1560	
454	69012-601-201	ASS'Y PRE AMP ; X1 PAL 4M'D	
		TRANPORT MECHANISM ASSEMBLY	
T202	65224-606-220	CAP(NO.8 GUIDE);DURACON M90-44	
T203	69000-290-220	ASSY LED(R);DX1-NR2	
T206	69000-280-244	G/R & P/B ASSY "R" ;X-1	
T207	69000-280-242	G/R & P/B ASSY "L" ; X-1	
T209	65292-600-620	LOADING UNIT ASSY;POM+SUS+SECC	
T209-1	64769-052-140	MOTOR-LOADING;RF-370C-15370	
T209-2	63579-101-026	SW-PROGRAM;SRZZ-S-092(X-1)	
T209-3	65204-613-310	GEAR WORM;PBT(DURANEX 82002)	
T213	65203-604-910	WORM GEAR WHEEL;POM(X-1)	
T214	65203-605-010	E/T DRIVE GEAR;PBT(X-1)	
T215	65241-600-010	MASTER CAM GEAR;POM(X-1)	
T216	66613-610-710	E/J DRIVE BRKT;SECC T1.2	
T217	66674-639-210	S/P EJECT DRIVE;SUP8	
T219	65253-611-610	PINCH ROLLER LEVER ASS'Y	
T220	65263-601-030	BRAKE LEVER CAM ASS'Y;SECC 20/20+SUM	
T221	65234-602-610	REEL DISK "L" ASS'Y;POM+SUS	
T222	65234-602-620	REEL DISK "R" ASS'Y;POM+PO CYSETER	
T228	65254-626-510	BRAKE SUB "R" ASS'Y;X-1	
T229	66603-612-810	BRAKE SUB "L" ;POM	
T233	66054-609-410	IDLER SUB ASSY;(X-1)	
T235	65253-609-010	TENSION ARM ASS'Y;SECC+POM+SUS	
T236	65274-603-110	TENSION BAND ASS'Y;POM+FELT+LUMIRROR	
T237	66674-640-510	TENSION SPRING;SUS304-WPB	
T238	65263-600-810	REVIEW ARM ASS'Y;SECC 20/20+SUS	
T239	66674-639-020	S/P REVIEW ARM;SUS304-WPB P10.55	
T240	67224-602-011	NYLON NUT;M3 X 4.5 NYLON 66 + SWR	
T242	69000-290-230	ASSY-PCB JOINT(R);DX1-NR2	
T244	65253-609-310	REC LEVER S/W;POM	
T245	66674-641-010	S/P REC S/W;SUS304 WPB	
T252	66674-640-920	SPRING TORSION A/C;SUP8 (NI)	
T253	67224-602-011	NYLON NUT;M3 X 4.5 NYLON 66 + SWR	
T254	67224-602-210	CAM ADJUST;ALLOY 5	
T255	69000-290-260	ASSY-A/C HEAD(R);DX1-NR2	
T256	64079-700-454	HEAD MAGNETIC F/E;VTR-1A2EBS11-059(X-1)	
T300	69019-123-050	CYLINDER ASS'Y;CX1D4P	
T301	69000-390-013	ASSY-UPPER CYLINDER;CX1D4P	
T302	63005-701-075	PUB-UPPER CYLINDER ; 94VO 47X47X1.0T	
T303	69000-390-021	ASSY-LOWER CYLINDER;CX1D4	
T304	67223-600-110	HOLDER TR ASSY;ZDC+SUS301 CSP T0.2	
T305	69000-390-060	SEMI ASSY-MOTOR(U);CX1	
T306	66121-601-210	CYLINDER-BASE;ADC 12(X-1)	
906	67008-130-061	SCREW-PH;+M3X6 FE FZY	
907	67004-100-710	SCREW-PH;+M3X4 FE FZY	
909	67008-126-081	SCREW-PH;+M2.6X8 FE FZY	
910	67008-126-041	SCREW-BH;+M2.6X5 FE FZY	
912	67008-126-236	SCREW-PH;+M2.3X6 FE FZY	
913	67008-123-101	SCREW-PH;+M2.3X10 FE FZY	
916	67004-126-086	SCREW-BH;+M2.6X8 WSZN/70391398	
917	67004-100-310	SCREW-PH;+M3X8 FE FZY WL	
922	67108-526-243	SCREW-TAP.PH;2S-3X6 FE FZY	
956	67304-103-410	WASHER-PLAIN;3.2X6X0.5 POLYSLIDER	
957	67334-600-310	WASHER SLIT;PI2.5XPI5XT0.5	
961	67304-602-610	WASHER SLIT;PI3.6XPI12XT0.5 LUMIRROR	
CN202	63053-916-297	LEAD CON ASSY;1429 #26 F-F-06 1L-M-6P-SA	
		BOTTOM SIDE MECHANISM ASSEMBLY	
B204	65264-606-510	LOADING GEAR "L" ASS'Y ; X-1	
B205	65264-606-610	LOADING GEAR "R" ASS'Y ; X-1	
B208	65263-601-110	SECTOR GEAR ASS'Y;SECC+S.P	

LOCA.NO	PART-NUMBER	DESCRIPTION;SPECIFICATION	REMARK
B223	65254-626-210	MAIN BRAKE "L" ASS'Y ; X-1	
B224	65254-626-310	MAIN BRAKE "R" ASS'Y ; X-1	
B225	66674-640-710	S/P SUB "R" ; SUP8(BLK)	
B226	66674-640-810	S/P SUB "L" ; SUS 304 WP8	
B227	66674-642-710	S/P MAIN SLIDE;SUP8(YEL)	
B230	65252-600-910	MAIN BRAKE SLIDE ASS'Y;PBT+SUS	
B231	65253-609-210	LEVER SHIFT;POM	
B232	65294-602-310	TENSION CONTROL LEVER;POM	
B234	66053-604-410	CLUTCH ASS'Y;(X-1)	
B241	66614-625-010	HEAD BRUSH ASSY;SECC T1.0+CARBON TIP	
B243	63054-309-110	SUMI-CARD;P1.25 SP 180a/m	
B246	69000-290-240	ASSY-REEL PCB(R);DX1-NR2	
B247	64769-052-236	MOTOR D.D CAPSTAN;F2QKB89(X-1)	
B248	65254-626-020	D.D BRAKE ASS'Y;PBT+FELT	
B249	65274-603-210	CAPSTAN BELT;CY65(X-1)	
B250	66674-638-[illegible]	D.D CAPSTAN S/P;SUS 304(X-1)	
B257	66674-646-910	GROUND PLATE BOTTOM;SUS 430 T0.3	
B258	63579-101-027	SW-RECORD;SPP8-S-061	
B259	66604-633-710	STOPPER P/I;POM	
907	67004-100-710	SCREW-PH;+M3X4 FE FZY	
920	67128-520-203	SCREW-TAPTITE PWH;M2.6X6 FE FZY	
922	67108-526-243	SCREW-TAP.PH;2S-3X8 FE FZY	
956	67304-103-410	WASHER-PLAIN;3.2X6X0.5 POLYSLIDER	
957	67334-600-310	WASHER SLIT;PI2.5XPI5XT0.5	
961	67304-602-610	WASHER SLIT;PI3.6XPI12XT0.5 LUMIRROR(RED	
CN6204	63053-804-128	LEAD CONNECTOR ASSY#26 51004-51004 4P	
Q6202	62309-110-244	PHOTO INTERRUPTER;NJL5165K	
H500	66122-700-630	F/L HOUSING ASS'Y ; HF-X	
H501	66151-602-210	UPPER CHASSIS;SECC 20/20 T=1.0**	
H502	66461-600-120	GUIDE CASSETTE;ABS(GP-2200)BLK	
H503	69000-470-610	SIDE CHASSIS(L)ASS'Y;ABS+POM	
H504	69000-470-690	SIDE CHASSIS "R" ASS'Y;ABS+POM+SECC	
H552	69000-470-620	ASS'Y CASS HOLDER;SECC+POM+SUS	
H553	69000-470-660	PWB SENSOR ASSY;PWB+TR+WIRE	
H556	69000-470-650	ASSY-SIDE ARM;SUM+POM+DURCON	
H561	65253-608-510	MASK CAM LEVER;POM(M90-44)	
H562	65204-613-510	LIGHT SHUTTER;POM(M90-44)	
H563	66674-639-820	S/P LIGHT SHUTTER;SUS 304 WPB	
H565	66674-639-310	S/P ARM TORSION	
H573	65203-605-310	JOINT GEAR;POM(WHT)	
H574	65253-605-310	EJECT SLIDE;SECC 20/20 T=1.6	
C6202	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N	
C6203	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N	
Q6203	62309-110-510	PHOTO TR;RPM-20DB	
Q6204	62309-110-510	PHOTO TR;RPM-20DB	
T242	69000-290-230	ASSY-PCB JOINT;DX1-NR2	
C6204	61607-402-230	C-ELECTROLYTIC;CE04W 50V TAPG 3.3M	
CN6203	63053-208-106	LEAD CONNECTOR ASSY;1429 #26 51004-5295	
D6201	62169-406-482	DIDEO;1N4148 SAMSUNG	
IC6201	62119-103-712	IC;TC4021BP	
Q6201	62137-302-740	TRANSISTOR;KSC 945-Y TAPG	
R6201	61048-177-124	R-METAL FILM;RM 1/8TS 120K-J	
R6202	61048-177-224	R-METAL FILM;RM 1/8TS 220K-J	
R6203	61048-177-472	R-METAL FILM;RM 1/8TS 4.7K-J	
R6204	61048-177-472	R-METAL FILM;RM 1/8TS 4.7K-J	
R6205	61048-177-472	R-METAL FILM;RM 1/8TS 4.7K-J	
R6206	61048-177-472	R-METAL FILM;RM 1/8TS 4.7K-J	
R6207	61048-177-474	R-METAL FILM;RM 1/8TS 470K-J	
R6208	61048-177-224	R-METAL FILM;RM 1/8TS 220K-J	
R6209	61048-177-472	R-METAL FILM;RM 1/8TS 4.7K-J	
R6210	61048-177-391	R-METAL FILM;RM 1/8TS 390-J	
R6212	61048-177-224	R-METAL FILM;RM 1/8TS 220K-J	

6-2. ELECTRICAL REPLACEMENT PARTS LIST

LOCA.NO	PART-NUMBER	DESCRIPTION;SPECIFICATION	REMARK
	69098-600-966	REGULATOR ASSY;VX-1260/SEG	
	63053-811-221	POWER CORD ASSY;KLCE-2F CP-2	
BD101	62169-403-562	DIODE-STACK;RBV402	
BD102	62169-403-562	DIODE-STACK;RBV402	
C101	61409-601-320	C-CERAMIC;ECK-DMS 472ME	
C102	61639-906-332	C-ELEC;LC-1831-3300-35-M	
C103	61637-205-470	C-ELEC;CEAP 25V 47M SA(6X11)	
C104	61639-906-332	C-ELEC;LC-1831-3300-35-M	
C105	61637-206-100	C-ELEC;CEAP 35V 10M SA(5X11)	
C106	61639-904-472	C-ELEC;LC-1628-4700-16-M	
C107	61607-421-130	C-ELECTROLYTIC;LC-0511-47-16-M TAPE	
C108	61637-511-470	C-ELEC;CEAP 100V 47M SG(10X12.5)	
C109	61607-404-473	C-ELECTROLYTIC;CE04M TAPE 100V 47M	
C110	61417-109-210	C-CERAMIC.HK;CK45F TAPE 50V 104-Z	
CN100	63053-307-990	LEAD CONNECTOR ASSY;1007 #26 320 RED Q10	
D101	62169-406-482	DIODE;1N4148 SAMSUNG	
D102	62169-406-482	DIODE;1N4148 SAMSUNG	
D103	62169-201-060	DIODE;1N4002 TAPE	
D104	62169-201-060	DIODE;1N4002 TAPE	
F101	64709-084-841	FUSE;T315mA 250V TI9195 5X20MM WIC EUR	
F102	64709-084-842	FUSE;T2.0A 250V TI9195 5X20MM WIC EUR	
F103	64709-084-810	FUSE;T1.6A 250V TI9195 5X20mm WIC EUR	
IC101	62109-201-282	IC;MC7812	
LF101	62429-014-115	LINE-FILTER;ML38	
PT101	62869-190-132	POWER-TRANS;EI 66X24 220/240V 50HZ	
Q101	62149-401-308	TRANSISTOR;2SD 1944	
Q102	62149-401-308	TRANSISTOR;2SD 1944	
Q103	62137-103-380	TRANSISTOR;KSA 733-Y TAPE	
R101	61049-427-621	R-METAL OXIDE;RS 1P 620-J TAPE	
R102	61048-327-271	R-METAL FILM;RS 1/2P 270-J TAPE	
R103	61048-324-122	R-METAL FILM;RM 1/2P 1.2K-J	
R104	61048-277-102	R-METAL FILM;RM 1/4T TAPE 1K-J	
ZD101	62169-403-302	DIODE-ZENER;MTZ 16A TAPE	
ZD102	62169-403-789	DIODE-ZENER;MTZ5.6C TAPE	
ZD103	62169-403-829	DIODE-ZENER;MTZ 30B	
		REMOCON ASSY	
	69099-613-120	REMOCON ASS'Y ; VX-1561	
	67643-508-010	DOOR-BATTERY;VX-1561	
CT01	61617-408-229	C-ELEC;CEAP 50V 2.2M RSS(4X7)	
CT02	61607-421-130	C-ELECTROLYTIC;LC-0511-47-16-M TAPE	
CT03	61417-109-210	C-CERAMIC.HK;CK45F TAPE 50V 104-Z	
CT04	61417-109-210	C-CERAMIC.HK;CK45F TAPE 50V 104-Z	
CT05	61417-109-210	C-CERAMIC.HK;CK45F TAPE 50V 104-Z	
CT06	61407-105-850	C-CERAMIC.TEMP;CC45 CH TAPE 50V 8-D	
CT07	61417-109-210	C-CERAMIC.HK;CK45F TAPE 50V 104-Z	
DT02	62169-406-482	DIODE;1N4148 SAMSUNG	
DT04	62169-406-482	DIODE;1N4148 SAMSUNG	
ICT01	62119-103-723	IC;LC5864M-1177	
ICT02	62119-401-385	IC;74HC08 SMT TYPE	
LCD1	62309-109-060	LCD;CG537 TS(A)	
LT01	62309-112-041	LED-IR;GL538	
QT01	62149-301-431	TRANSISTOR;KSC 1008-Y	
RT01	61048-177-102	R-METAL FILM;RM 1/8TS 1K-J	
RT02	61048-177-689	R-METAL FILM;RM 1/8TS 6.8-J	
RT03	61048-177-303	R-METAL FILM;RM 1/8TS 30K-J	
XT01	64539-012-528	CRYSTAL;38.2294KHZ	
	69099-615-100	REMOCON ASS'Y ; VX-1560	
	69099-615-120	REMOCON ASS'Y ; VI-1560	
	67643-608-910	DOOR-BATTERY REMOCON;VX-1560 ABS 94HB	
CT01	61617-408-229	C-ELEC;CEAP 50V 2.2M RSS(4X7)	
CT02	61607-421-130	C-ELECTROLYTIC;LC-0511-47-16-M TAPE	
CT03	61407-117-101	C-CERAMIC.AXIAL;UP050F 104Z	
CT04	61407-117-101	C-CERAMIC.AXIAL;UP050F 104Z	
CT05	61407-117-101	C-CERAMIC.AXIAL;UP050F 104Z	
CT06	61407-105-850	C-CERAMIC.TEMP;CC45 CH TAPE 50V 8-D	
CT07	61407-117-101	C-CERAMIC.AXIAL;UP050F 104Z	
DT02	62169-406-482	DIODE;1N4148 (UNIQUE PARTS OF VX-1560)	
DT04	62169-406-482	DIODE;1N4148 SAMSUNG	
ICT01	62119-103-723	IC;LC5864M-1177	
ICT02	62119-401-385	IC;74HC08 SMT TYPE	
LCD01	62309-109-030	LCD;CG434-TS	
LT01	62309-112-036	LED-IR;CL2	
LT02	62309-112-036	LED-IR;CL2	
QT01	62149-301-431	TRANSISTOR;KSC 1008-Y	
RT01	61048-177-101	R-METAL FILM;RM 1/8TS 100-J	
RT02	61048-177-109	R-METAL FILM;RM 1/8TS 1-J	
RT03	61048-177-303	R-METAL FILM;RM 1/8TS 30K-J	
XT01	64539-012-528	CRYSTAL;38.2294KHZ	

LOCA.NO	PART-NUMBER	DESCRIPTION;SPECIFICATION	REMARK
		ASS'Y F/TIMER	
	69071-601-203	ASSY F/TIMER;X1 PAL VX-1560	
	69071-601-201	ASSY F/TIMER;X1 PAL VX-1561	
	69071-603-208	ASSY F/TIMER;X1 PAL VI-1560	
		F/TIMER COMMON PARTS	
C701	61607-421-130	C-ELECTROLYTIC;LC-0511-47-16-M TAPE	
C702	61617-404-220	C-ELEC;CEAP 16V 22M RSS(5X7)	
C703	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPE 16V 0.01-M	
C705	61617-404-101	C-ELEC;CEAP 16V 100M RSS(8X9)	
C706	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPE 16V 0.01-M	
C707	61407-105-270	C-CERAMIC.TEMP;CC45 CH TAPE 50V 27-J	
C708	61407-105-270	C-CERAMIC.TEMP;CC45 CH TAPE 50V 27-J	
CN701	63054-611-030	FLAT-CABLE;2760 #26 2.0C-11P-30m/m	
CN702	63348-125-200	CONNECTOR-HOUSING;5533-20AP8	
CN703	63348-125-200	CONNECTOR-HOUSING;5533-20AP8	
D701	62169-406-482	DIODE;1N4148 SAMSUNG	
D702	62169-406-482	DIODE;1N4148 SAMSUNG	
D703	62169-406-482	DIODE;1N4148 SAMSUNG	
D704	62169-406-482	DIODE;1N4148 SAMSUNG	
D705	62169-406-482	DIODE;1N4148 SAMSUNG	
D706	62169-406-482	DIODE;1N4148 SAMSUNG	
D707	62169-406-482	DIODE;1N4148 SAMSUNG	
D708	62169-406-482	DIODE;1N4148 SAMSUNG	
D709	62169-406-482	DIODE;1N4148 SAMSUNG	
D710	62169-406-482	DIODE;1N4148 SAMSUNG	
D712	62169-406-482	DIODE;1N4148 SAMSUNG	
D713	62169-406-482	DIODE;1N4148 SAMSUNG	
D714	62169-406-482	DIODE;1N4148 SAMSUNG	
D719	62169-406-482	DIODE;1N4148 SAMSUNG	
D720	62169-406-482	DIODE;1N4148 SAMSUNG	
D721	62169-423-092	DIODE-ZENER;MTZ 6.8B	
DT701	62319-013-110	DIGITRON;14-BT-18GK	
IC701	62119-110-948	IC;UPD759216ACW-811	
IC702	62119-101-338	IC;CAT93C46P	
IC703	62119-103-676	IC;MN1280-Q	
Q701	62139-302-741	TRANSISTOR;KSC 945-Y	
Q702	62139-302-741	TRANSISTOR;KSC 945-Y	
R701	61048-277-101	R-METAL FILM;RM 1/4T 100-J	
R702	61048-277-101	R-METAL FILM;RM 1/4T 100-J	
R703	61048-177-103	R-METAL FILM;RM 1/8TS 10K-J	
R704	61048-177-104	R-METAL FILM;RM 1/8TS 100K-J	
R705	61048-177-103	R-METAL FILM;RM 1/8TS 10K-J	
R706	61048-177-222	R-METAL FILM;RM 1/8TS 2.2K-J	
R707	61048-177-222	R-METAL FILM;RM 1/8TS 2.2K-J	
R708	61048-177-221	R-METAL FILM;RM 1/8TS 220-J	
R709	61048-177-223	R-METAL FILM;RM 1/8TS 22K-J	
R714	61048-177-154	R-METAL FILM;RM 1/8TS 150K-J	
R715	61048-177-154	R-METAL FILM;RM 1/8TS 150K-J	
R716	61048-177-154	R-METAL FILM;RM 1/8TS 150K-J	
R718	61048-177-102	R-METAL FILM;RM 1/8TS 1K-J	
R719	61048-177-683	R-METAL FILM;RM 1/8TS 68K-J	
R720	61048-177-102	R-METAL FILM;RM 1/8TS 1K-J	
R721	61048-177-102	R-METAL FILM;RM 1/8TS 1K-J	
R722	61048-177-102	R-METAL FILM;RM 1/8TS 1K-J	
R723	61048-177-683	R-METAL FILM;RM 1/8TS 68K-J	
R724	61048-177-683	R-METAL FILM;RM 1/8TS 68K-J	
R725	61048-177-683	R-METAL FILM;RM 1/8TS 68K-J	
R726	61048-177-683	R-METAL FILM;RM 1/8TS 68K-J	
R750	61048-177-102	R-METAL FILM;RM 1/8TS 1K-J	
R751	61048-177-102	R-METAL FILM;RM 1/8TS 1K-J	
R752	61048-177-102	R-METAL FILM;RM 1/8TS 1K-J	
R753	61048-177-102	R-METAL FILM;RM 1/8TS 1K-J	
R754	61048-177-102	R-METAL FILM;RM 1/8TS 1K-J	
RM701	64529-312-041	REMOCON-MODULE;SBX1610-82	
SW701	63599-016-070	SW-TACT;EVQ-QS2 05K	
SW702	63599-016-070	SW-TACT;EVQ-QS2 05K	
SW703	63599-016-070	SW-TACT;EVQ-QS2 05K	
SW704	63599-016-070	SW-TACT;EVQ-QS2 05K	
SW705	63599-016-070	SW-TACT;EVQ-QS2 05K	
SW706	63599-016-070	SW-TACT;EVQ-QS2 05K	
SW707	63599-016-070	SW-TACT;EVQ-QS2 05K	
SW708	63599-016-070	SW-TACT;EVQ-QS2 05K	
SW709	63599-016-070	SW-TACT;EVQ-QS2 05K	
SW710	63599-016-070	SW-TACT;EVQ-QS2 05K	
SW711	63599-016-070	SW-TACT;EVQ-QS2 05K	
SW712	63599-016-070	SW-TACT;EVQ-QS2 05K	
SW713	63599-016-070	SW-TACT;EVQ-QS2 05K	
SW714	63599-016-070	SW-TACT;EVQ-QS2 05K	
SW715	63599-016-070	SW-TACT;EVQ-QS2 05K	
SW717	63599-016-070	SW-TACT;EVQ-QS2 05K	
SW718	63599-016-070	SW-TACT;EVQ-QS2 05K	
SW719	63599-016-070	SW-TACT;EVQ-QS2 05K	
SW720	63599-016-070	SW-TACT;EVQ-QS2 05K	
SW721	63599-016-070	SW-TACT;EVQ-QS2 05K	
SW722	63599-016-070	SW-TACT;EVQ-QS2 05K	
SW723	63599-016-070	SW-TACT;EVQ-QS2 05K	

LOCA.NO	PART-NUMBER	DESCRIPTION;SPECIFICATION	REMARK
SW724	63599-016-070	SW-TACT;EVQ-GS2 05K	
SW725	63599-016-070	SW-TACT;EVQ-GS2 05K	
SW726	63599-016-070	SW-TACT;EVQ-GS2 05K	
SW727	63599-016-070	SW-TACT;EVQ-GS2 05K	
VR701	61203-107-110	VR ROUND;RK09K1130/RH01G2S0 20KB	
X1701	64539-102-044	CERAMIC-RESONATOR;FCR 4.19MC	
X1702	64539-021-010	CRYSTAL;P-3(32.768KHZ)	
		UNIQUE PARTS OF VX-1560	
D711	62169-406-482	DIODE;1N4148 SAMSUNG	
D723	62169-406-482	DIODE;1N4148 SAMSUNG	
L701	62429-833-101	COIL-PEAKING AXIAL;BAL04ST 101K	
		UNIQUE PARTS OF VX-1561	
C750	61407-101-460	C-CERAMIC.TEMP;CC45 SL TAPG 50V 270-J	
D718	62169-406-482	DIODE;1N4148 SAMSUNG	
R711	61048-177-102	R-METAL FILM;RM 1/8TS 1K-J	
R712	61048-177-102	R-METAL FILM;RM 1/8TS 1K-J	
R713	61048-177-102	R-METAL FILM;RM 1/8TS 1K-J	
R717	61048-177-102	R-METAL FILM;RM 1/8TS 1K-J	
SW716	63599-016-070	SW-TACT;EVQ-GS2 05K	
		UNIQUE PARTS OF VI-1560	
D718	62169-406-482	DIODE;1N4148 SAMSUNG	
R711	61048-177-102	R-METAL FILM;RM 1/8TS 1K-J	
R712	61048-177-102	R-METAL FILM;RM 1/8TS 1K-J	
R713	61048-177-102	R-METAL FILM;RM 1/8TS 1K-J	
R717	61048-177-102	R-METAL FILM;RM 1/8TS 1K-J	
SW716	63599-016-070	SW-TACT;EVQ-GS2 05K	
	69057-603-204	ASSY MAIN ; VX-1560/1561	
	69057-603-205	ASSY MAIN ; VI-1560	
		POWER PARTS	
C111	61607-421-130	C-ELECTROLYTIC;LC-0511-47-16-M TAPG	
C112	61607-421-130	C-ELECTROLYTIC;LC-0511-47-16-M TAPG	
C114	61607-421-130	C-ELECTROLYTIC;LC-0511-47-16-M TAPG	
CN101	63053-110-125	LEAD CONNECTOR ASSY;1429 #26 5295-5264	
D105	62169-406-482	DIODE;1N4148 SAMSUNG	
D106	62169-201-050	DIODE;1N4001 TAPG	
D108	62169-201-050	DIODE;1N4001 TAPG	
D109	62169-201-050	DIODE;1N4001 TAPG	
D110	62169-201-050	DIODE;1N4001 TAPG	
Q104	62147-401-835	TRANSISTOR;KSA 928A-Y TAPG	
Q105	62147-401-835	TRANSISTOR;KSA 928A-Y TAPG	
Q106	62137-701-010	TRANSISTOR;KSR 1001 TAPG	
Q107	62137-701-012	TRANSISTOR;KSR 1003 TAPG	
Q108	62137-701-022	TRANSISTOR;KSR 2003 TAPG	
R105	61048-177-222	R-METAL FILM;RM 1/8TS 2.2K-J	
R106	61048-177-562	R-METAL FILM;RM 1/8TS 5.6K-J	
R107	61048-177-562	R-METAL FILM;RM 1/8TS 5.6K-J	
R108	61048-177-681	R-METAL FILM;RM 1/8TS 680-J	
R110	61048-277-821	R-METAL FILM;RM 1/4T 820-J	
		SYSTEM CONTROL PARTS	
C603	61407-101-460	C-CERAMIC.TEMP;CC45 SL TAPG 50V 270-J	
C604	61407-101-460	C-CERAMIC.TEMP;CC45 SL TAPG 50V 270-J	
C605	61407-101-460	C-CERAMIC.TEMP;CC45 SL TAPG 50V 270-J	
L602	62429-833-101	COIL-PEAKING AXIAL;BAL04ST 101K	
Q601	62137-701-022	TRANSISTOR;KSR 2003 TAPG	
R609	61048-177-102	R-METAL FILM;RM 1/8TS 1K-J	
R610	61048-177-102	R-METAL FILM;RM 1/8TS 1K-J	
R611	61048-177-102	R-METAL FILM;RM 1/8TS 1K-J	
		SERVO PARTS	
C201	61637-206-100	C-ELEC;CEAP 35V 10M SA(5X11)	
C202	61507-121-340	C-POLYESTER;C0921M TAPG 100V 102-K	
C203	61637-208-010	C-ELEC;CEAP 50V 1M SA(5X11)	
C204	61507-121-430	C-POLYESTER;C0921M TAPG 100V 472-K	
C206	61507-121-550	C-POLYESTER;C0921M TAPG 50V 473-K	
C207	61637-206-100	C-ELEC;CEAP 35V 10M SA(5X11)	
C208	61637-208-010	C-ELEC;CEAP 50V 1M SA(5X11)	
C209	61607-421-120	C-ELECTROLYTIC;LC-0511-4.7-50-M TAPG	
C210	61507-121-550	C-POLYESTER;C0921M TAPG 50V 473-K	
C211	61637-206-100	C-ELEC;CEAP 35V 10M SA(5X11)	
C212	61637-206-100	C-ELEC;CEAP 35V 10M SA(5X11)	
C213	61507-121-340	C-POLYESTER;C0921M TAPG 100V 102-K	
C214	61507-121-620	C-POLYESTER;C0921M 100V TAPG 224-K	
C215	61607-421-130	C-ELECTROLYTIC;LC-0511-47-16-M TAPG	
C216	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-M	
C217	61417-109-040	C-CERAMIC.HK;CK45F TAPG 50V 102-Z	
C218	61607-421-160	C-ELECTROLYTIC;LC-0511-22-16-M TAPG	
C219	61607-421-160	C-ELECTROLYTIC;LC-0511-22-16-M TAPG	
C220	61407-101-460	C-CERAMIC.TEMP;CC45 SL TAPG 50V 270-J	

LOCA.NO	PART-NUMBER	DESCRIPTION;SPECIFICATION	REMARK
C221	61507-121-260	C-POLYESTER;C0921M TAPG 50V 104-J	
C222	61637-206-100	C-ELEC;CEAP 35V 10M SA(5X11)	
C224	61607-421-120	C-ELECTROLYTIC;LC-0511-4.7-50-M TAPG	
C226	61417-109-040	C-CERAMIC.HK;CK45F TAPG 50V 102-Z	
C228	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-M	
C233	61507-121-481	C-POLYESTER;C0921M TAPG 50V 153-J	
C234	61637-208-010	C-ELEC;CEAP 50V 1M SA(5X11)	
C235	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-M	
C236	61637-208-010	C-ELEC;CEAP 50V 1M SA(5X11)	
C237	61407-117-228	C-CERAMIC.AXIAL;CAX SL TAPG 50V 223-Z	
C238	61417-109-210	C-CERAMIC.HK;CK45F TAPG 50V 104-Z	
C239	61637-208-339	C-ELEC;CEAP 50V 3.3M SA(5X11)	
C240	61417-109-210	C-CERAMIC.HK;CK45F TAPG 50V 104-Z	
C241	61617-404-470	C-ELEC;CEAP 16V 47M RSS(6.3X7)	
C242	61637-504-471	C-ELEC;CEAP 16V 470M SG(10X12.5)	
C243	61637-206-100	C-ELEC;CEAP 35V 10M SA(5X11)	
C244	61507-121-600	C-POLYESTER;C0921M TAPG 100V 563-K	
C245	61637-504-101	C-ELEC;CEAP 16V 100M SG(6.3X11)	
C246	61407-101-460	C-CERAMIC.TEMP;CC45 SL TAPG 50V 270-J	
C248	61407-101-460	C-CERAMIC.TEMP;CC45 SL TAPG 50V 270-J	
CN201	63053-209-126	LEAD CONNECTOR ASSY;1429 #26 5295-51004	
CN202	63053-916-298	LEAD CONNECTOR ASSY;1429 #26 6P 250m/m	
CN204	63054-607-250	FLAT-CABLE;2760 #26 2.0C-7P-250m/m	
D202	62169-406-482	DIODE;1N4148 SAMSUNG	
D205	62169-406-482	DIODE;1N4148 SAMSUNG	
D206	62169-406-482	DIODE;1N4148 SAMSUNG	
D208	62169-406-482	DIODE;1N4148 SAMSUNG	
D209	62169-406-482	DIODE;1N4148 SAMSUNG	
D210	62169-406-482	DIODE;1N4148 SAMSUNG	
D211	62169-406-482	DIODE;1N4148 SAMSUNG	
D212	62169-201-050	DIODE;1N4001 TAPG	
D213	62169-201-050	DIODE;1N4001 TAPG	
D214	62169-406-482	DIODE;1N4148 SAMSUNG	
D215	62169-406-482	DIODE;1N4148 SAMSUNG	
D216	62169-406-482	DIODE;1N4148 SAMSUNG	
D217	62169-406-482	DIODE;1N4148 SAMSUNG	
D250	62169-406-482	DIODE;1N4148 SAMSUNG	
IC201	62119-401-862	IC;HD49748NT	
IC202	62119-401-872	IC;LM393(N.M)	
IC203	62119-501-572	IC-LINEAR;LM358S(N.M)	
IC204	62119-101-770	IC;TC4094BP/MC14094BCP	
IC205	62119-101-770	IC;TC4094BP/MC14094BCP	
IC206	62119-401-300	IC;KA8301(N.M)	
L201	62429-833-101	COIL-PEAKING AXIAL;BAL04ST 101K	
Q205	62137-701-012	TRANSISTOR;KSR 1003 TAPG	
Q209	62137-302-740	TRANSISTOR;KSC 945-Y TAPG	
Q210	62137-103-380	TRANSISTOR;KSA 733-Y TAPG	
Q211	62137-103-380	TRANSISTOR;KSA 733-Y TAPG	
Q212	62137-302-740	TRANSISTOR;KSC 945-Y TAPG	
Q213	62137-701-012	TRANSISTOR;KSR 1003 TAPG	
Q214	62137-701-013	TRANSISTOR;KSR 1004 TAPG	
Q215	62147-401-835	TRANSISTOR;KSA 928A-Y TAPG	
Q216	62147-401-830	TRANSISTOR;KSD 261-Y TAPG	
R201	61048-177-102	R-METAL FILM;RM 1/8TS 1K-J	
R202	61048-177-104	R-METAL FILM;RM 1/8TS 100K-J	
R203	61048-177-104	R-METAL FILM;RM 1/8TS 100K-J	
R204	61048-177-823	R-METAL FILM;RM 1/8TS 82K-J	
R205	61048-177-472	R-METAL FILM;RM 1/8TS 4.7K-J	
R206	61048-177-563	R-METAL FILM;RM 1/8TS 56K-J	
R207	61048-177-104	R-METAL FILM;RM 1/8TS 100K-J	
R208	61048-177-104	R-METAL FILM;RM 1/8TS 100K-J	
R209	61048-177-122	R-METAL FILM;RM 1/8TS 1.2K-J	
R210	61048-177-362	R-METAL FILM;RM 1/8TS 3.6K-J	
R211	61048-177-103	R-METAL FILM;RM 1/8TS 10K-J	
R212	61048-177-103	R-METAL FILM;RM 1/8TS 10K-J	
R214	61048-177-272	R-METAL FILM;RM 1/8TS 2.7K-J	
R217	61048-177-334	R-METAL FILM;RM 1/8TS 330K-J	
R218	61048-177-562	R-METAL FILM;RM 1/8TS 5.6K-J	
R219	61048-177-334	R-METAL FILM;RM 1/8TS 330K-J	
R220	61048-177-182	R-METAL FILM;RM 1/8TS 1.8K-J	
R221	61048-177-103	R-METAL FILM;RM 1/8TS 10K-J	
R222	61048-177-105	R-METAL FILM;RM 1/8TS 1M-J	
R223	61048-177-683	R-METAL FILM;RM 1/8TS 68K-J	
R224	61048-177-334	R-METAL FILM;RM 1/8TS 330K-J	
R225	61048-177-105	R-METAL FILM;RM 1/8TS 1M-J	
R226	61048-177-393	R-METAL FILM;RM 1/8TS 39K-J	
R227	61048-177-564	R-METAL FILM;RM 1/8TS 560K-J	
R228	61048-177-103	R-METAL FILM;RM 1/8TS 10K-J	
R229	61048-177-103	R-METAL FILM;RM 1/8TS 10K-J	
R230	61048-177-104	R-METAL FILM;RM 1/8TS 100K-J	
R231	61048-177-473	R-METAL FILM;RM 1/8TS 47K-J	
R232	61048-177-105	R-METAL FILM;RM 1/8TS 1M-J	
R233	61048-177-183	R-METAL FILM;RM 1/8TS 18K-J	
R234	61048-177-154	R-METAL FILM;RM 1/8TS 150K-J	
R235	61048-177-823	R-METAL FILM;RM 1/8TS 82K-J	
R236	61048-177-474	R-METAL FILM;RM 1/8TS 470K-J	
R237	61048-177-224	R-METAL FILM;RM 1/8TS 220K-J	
R238	61048-177-823	R-METAL FILM;RM 1/8TS 82K-J	
R239	61048-177-822	R-METAL FILM;RM 1/8TS 8.2K-J	
R240	61048-177-431	R-METAL FILM;RM 1/8TS 430-J	

LOCA.NO	PART-NUMBER	DESCRIPTION;SPECIFICATION	REMARK
R241	61048-177-102	R-METAL FILM;RM 1/8TS 1K-J	
R242	61048-177-105	R-METAL FILM;RM 1/8TS 1M-J	
R243	61048-177-103	R-METAL FILM;RM 1/8TS 10K-J	
R251	61048-177-104	R-METAL FILM;RM 1/8TS 100K-J	
R252	61048-177-103	R-METAL FILM;RM 1/8TS 10K-J	
R253	61048-177-272	R-METAL FILM;RM 1/8TS 2.7K-J	
R254	61048-177-103	R-METAL FILM;RM 1/8TS 10K-J	
R255	61048-177-431	R-METAL FILM;RM 1/8TS 430-J	
R256	61048-177-562	R-METAL FILM;RM 1/8TS 5.6K-J	
R257	61048-177-101	R-METAL FILM;RM 1/8TS 100-J	
R258	61048-177-272	R-METAL FILM;RM 1/8TS 2.7K-J	
R259	61049-427-010	R-METAL OXIDE;RS 1P 1-J	
R260	61048-177-103	R-METAL FILM;RM 1/8TS 10K-J	
R261	61048-177-222	R-METAL FILM;RM 1/8TS 2.2K-J	
R262	61048-177-222	R-METAL FILM;RM 1/8TS 2.2K-J	
R263	61048-177-472	R-METAL FILM;RM 1/8TS 4.7K-J	
R264	61048-177-472	R-METAL FILM;RM 1/8TS 4.7K-J	
R265	61048-177-102	R-METAL FILM;RM 1/8TS 1K-J	
R266	61048-177-102	R-METAL FILM;RM 1/8TS 1K-J	
R267	61048-177-102	R-METAL FILM;RM 1/8TS 1K-J	
R269	61048-177-102	R-METAL FILM;RM 1/8TS 1K-J	
R270	61048-177-102	R-METAL FILM;RM 1/8TS 1K-J	
R275	61048-177-102	R-METAL FILM;RM 1/8TS 1K-J	
R276	61048-177-302	R-METAL FILM;RM 1/8TS 3K-J	
R277	61048-177-103	R-METAL FILM;RM 1/8TS 10K-J	
R278	61048-177-122	R-METAL FILM;RM 1/8TS 1.2K-J	
R279	61048-177-102	R-METAL FILM;RM 1/8TS 1K-J	
R280	61048-177-330	R-METAL FILM;RM 1/8TS 33-J	
R281	61048-177-103	R-METAL FILM;RM 1/8TS 10K-J	
R282	61048-177-272	R-METAL FILM;RM 1/8TS 2.7K-J	
R283	61048-177-302	R-METAL FILM;RM 1/8TS 3K-J	
R284	61048-177-473	R-METAL FILM;RM 1/8TS 47K-J	
R285	61048-177-473	R-METAL FILM;RM 1/8TS 47K-J	
R289	61048-177-102	R-METAL FILM;RM 1/8TS 1K-J	
R291	61048-177-102	R-METAL FILM;RM 1/8TS 1K-J	
R292	61048-177-102	R-METAL FILM;RM 1/8TS 1K-J	
R293	61048-177-102	R-METAL FILM;RM 1/8TS 1K-J	
R294	61048-177-102	R-METAL FILM;RM 1/8TS 1K-J	
R295	61048-177-104	R-METAL FILM;RM 1/8TS 100K-J	
R296	61048-177-823	R-METAL FILM;RM 1/8TS 82K-J	
R297	61048-177-103	R-METAL FILM;RM 1/8TS 10K-J	
VR201	61247-101-104	VR-SEMI;EVN-DJA A03 B15 TAPG 100KB	
		VIDEO PARTS	
		VIDEO COMMON PARTS	
C3201	61637-204-330	C-ELEC;CEAP 16V 33M SA(5X11)	
C3202	61407-101-160	C-CERAMIC.TEMP;CC45 SL TAPG 50V 15-J	
C3203	61407-103-680	C-CERAMIC.TEMP;CC45 PH TAPG 50V 68-J	
C3204	61407-101-380	C-CERAMIC.TEMP;CC45 SL TAPG 50V 120-J	
C3205	61407-105-680	C-CERAMIC.TEMP;CC45 CH TAPG 50V 200-J	
C3206	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-M	
C3207	61407-105-250	C-CERAMIC.TEMP;CC45 CH TAPG 50V 39-J	
C3208	61637-206-100	C-ELEC;CEAP 35V 10M SA(5X11)	
C3209	61637-208-478	C-ELEC;CEAP 50V 0.47M SA(5X11)	
C3210	61607-421-160	C-ELECTROLYTIC;LC-0511-22-16-M TAPG	
C3211	61607-421-160	C-ELECTROLYTIC;LC-0511-22-16-M TAPG	
C3212	61637-208-229	C-ELEC;CEAP 50V 2.2M SA (5X11)	
C3214	61637-504-101	C-ELEC;CEAP 16V 100M SG(6.3X11)	
C3215	61407-101-160	C-CERAMIC.TEMP;CC45 SL TAPG 50V 15-J	
C3216	61407-101-510	C-CERAMIC.TEMP;CC45 SL TAPG 50V 470-J	
C3217	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-M	
C3218	61507-121-570	C-POLYESTER;C0921M TAPG 100V 683-K	
C3219	61407-105-280	C-CERAMIC.TEMP;CC45 CH TAPG 50V 56-J	
C3220	61407-101-360	C-CERAMIC.TEMP;CC45 SL TAPG 50V 100-J	
C3221	61407-105-330	C-CERAMIC.TEMP;CC45 CH TAPG 50V 33-J	
C3222	61637-208-478	C-ELEC;CEAP 50V 0.47M SA(5X11)	
C3223	61607-421-120	C-ELECTROLYTIC;LC-0511-4.7-50-M TAPG	
C3224	61637-208-478	C-ELEC;CEAP 50V 0.47M SA(5X11)	
C3225	61407-101-160	C-CERAMIC.TEMP;CC45 SL TAPG 50V 15-J	
C3226	61407-101-360	C-CERAMIC.TEMP;CC45 SL TAPG 50V 100-J	
C3227	61407-101-490	C-CERAMIC.TEMP;CC45 SL TAPG 50V 390-J	
C3228	61407-105-660	C-CERAMIC.TEMP;CC45 CH TAPG 50V 5-D	
C3229	61407-101-440	C-CERAMIC.TEMP;CC45 SL TAPG 50V 220-J	
C3230	407-101-483	C-CERAMIC.TEMP;CC45 SL TAPG 50V 47-J	
C3231	407-101-200	C-CERAMIC.TEMP;CC45 SL TAPG 50V 22-J	
C3232	61407-101-170	C-CERAMIC.TEMP;CC45 SL TAPG 50V 150-J	
C3233	61637-504-101	C-ELEC;CEAP 16V 100M SG(6.3X11)	
C3234	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-M	
C3235	61507-121-470	C-POLYESTER;C0921M TAPG 100V 103-K	
C3236	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-M	
C3237	61637-608-338	C-ELEC;CEAP 50V 0.33M SV(5X9)	
C3238	61607-421-120	C-ELECTROLYTIC;LC-0511-4.7-50-M TAPG	
C3239	61607-421-130	C-ELECTROLYTIC;LC-0511-47-16-M TAPG	
C3240	61607-421-130	C-ELECTROLYTIC;LC-0511-47-16-M TAPG	
C3241	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-M	
C3242	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-M	
C3243	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-M	
C3290	61607-421-130	C-ELECTROLYTIC;LC-0511-47-16-M TAPG	

LOCA.NO	PART-NUMBER	DESCRIPTION;SPECIFICATION	REMARK
C3401	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-M	
C3402	61407-101-360	C-CERAMIC.TEMP;CC45 SL TAPG 50V 100-J	
C3403	61637-504-101	C-ELEC;CEAP 16V 100M SG(6.3X11)	
C3404	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-M	
C3405	61407-105-320	C-CERAMIC.TEMP;CC45 CH TAPG 50V 82-J	
C3406	61407-105-360	C-CERAMIC.TEMP;CC45 CH TAPG 50V 43-J	
C3407	61507-121-470	C-POLYESTER;C0921M TAPG 100V 103-K	
C3408	61637-208-010	C-ELEC;CEAP 50V 1M SA(5X11)	
C3409	61507-121-510	C-POLYESTER;C0921M TAPG 100V 223-K	
C3410	61507-121-570	C-POLYESTER;C0921M TAPG 100V 683-K	
C3411	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-M	
C3412	61507-121-510	C-POLYESTER;C0921M TAPG 100V 223-K	
C3413	61637-208-010	C-ELEC;CEAP 50V 1M SA(5X11)	
C3414	61637-208-010	C-ELEC;CEAP 50V 1M SA(5X11)	
C3415	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-M	
C3416	61407-101-360	C-CERAMIC.TEMP;CC45 SL TAPG 50V 100-J	
C3417	61507-121-430	C-POLYESTER;C0921M TAPG 100V 472-K	
C3418	61507-121-550	C-POLYESTER;C0921M TAPG 50V 473-K	
C3419	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-M	
C3420	61607-421-130	C-ELECTROLYTIC;LC-0511-47-16-M TAPG	
C3421	61407-101-360	C-CERAMIC.TEMP;CC45 SL TAPG 50V 100-J	
C3422	61637-208-010	C-ELEC;CEAP 50V 1M SA(5X11)	
C3423	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-M	
C3424	61507-121-550	C-POLYESTER;C0921M TAPG 50V 473-K	
C3425	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-M	
C3427	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-M	
C3429	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-M	
C3430	61607-421-130	C-ELECTROLYTIC;LC-0511-47-16-M TAPG	
C3436	61607-421-130	C-ELECTROLYTIC;LC-0511-47-16-M TAPG	
C3437	61407-105-320	C-CERAMIC.TEMP;CC45 CH TAPG 50V 82-J	
C3439	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-M	
C3502	61617-404-470	C-ELEC;CEAP 16V 47M RSS(6.3X7)	
C3504	61637-206-100	C-ELEC;CEAP 35V 10M SA(5X11)	
C3506	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-M	
C3507	61407-101-440	C-CERAMIC.TEMP;CC45 SL TAPG 50V 220-J	
C3508	61607-421-130	C-ELECTROLYTIC;LC-0511-47-16-M TAPG	
C3509	61637-504-471	C-ELEC;CEAP 16V 470M SG(10X12.5)	
C3510	61407-105-320	C-CERAMIC.TEMP;CC45 CH TAPG 50V 82-J	
C3511	61407-105-320	C-CERAMIC.TEMP;CC45 CH TAPG 50V 82-J	
CF3402	64569-006-011	DELAY LINE;MS-31PC-5K	
D3201	62169-406-482	DIODE;1N4148 SAMSUNG	
D3202	62169-406-482	DIODE;1N4148 SAMSUNG	
D3401	62169-406-482	DIODE;1N4148 SAMSUNG	
FL3201	64529-431-091	FILTER-LC DIP TYPE;C00003	
FL3401	64529-401-200	FILTER-LC;SFB 4141	
IC3201	62119-103-662	IC;LA7323	
IC3202	62119-701-063	IC;MSM7401RS	
IC3401	62119-103-650	IC;LA7331	
IC3501	62119-401-310	IC;KA8403	
L3201	62427-812-180	COIL-PEAKING;EL0606RA 18uH-J	
L3202	62427-812-220	COIL-PEAKING;EL0606RA 22uH-J	
L3203	62427-812-101	COIL-PEAKING;EL0606RA 100uH-J	
L3204	62427-812-221	COIL-PEAKING;EL0606RA 220uH-J	
L3205	62429-833-101	COIL-PEAKING AXIAL;BAL04ST 101K	
L3206	62427-812-470	COIL-PEAKING;EL0606RA 47uH-J	
L3207	62427-812-151	COIL-PEAKING;EL0606RA 150uH-J	
L3208	62427-812-101	COIL-PEAKING;EL0606RA 100uH-J	
L3209	62427-812-101	COIL-PEAKING;EL0606RA 100uH-J	
L3401	62429-833-101	COIL-PEAKING AXIAL;BAL04ST 101K	
L3402	62427-812-309	COIL-PEAKING;EL0606RA 3uH-K	
L3403	62427-812-180	COIL-PEAKING;EL0606RA 18uH-J	
L3404	62427-812-101	COIL-PEAKING;EL0606RA 100uH-J	
L3405	62427-813-822	COIL-PEAKING;EL0607RA 8200uH-J	
L3406	62427-812-101	COIL-PEAKING;EL0606RA 100uH-J	
L3408	62427-812-150	COIL-PEAKING;EL0606RA 15uH-J	
L3409	62427-812-220	COIL-PEAKING;EL0606RA 22uH-J	
L3503	62427-812-180	COIL-PEAKING;EL0606RA 18uH-J	
Q3201	62137-701-011	TRANSISTOR;KSR 1002 TAPG	
Q3202	62137-701-011	TRANSISTOR;KSR 1002 TAPG	
Q3203	62147-101-950	TRANSISTOR;KSA 643-Y TAPG	
Q3204	62137-302-740	TRANSISTOR;KSC 945-Y TAPG	
Q3205	62137-701-023	TRANSISTOR;KSR 2004 TAPG	
Q3206	62137-701-023	TRANSISTOR;KSR 2004 TAPG	
Q3210	62137-103-380	TRANSISTOR;KSA 733-Y TAPG	
Q3211	62137-302-740	TRANSISTOR;KSC 945-Y TAPG	
Q3212	62137-302-740	TRANSISTOR;KSC 945-Y TAPG	
Q3213	62137-103-380	TRANSISTOR;KSA 733-Y TAPG	
Q3214	62137-302-740	TRANSISTOR;KSC 945-Y TAPG	
Q3215	62137-701-020	TRANSISTOR;KSR 2001 TAPG	
Q3216	62137-701-011	TRANSISTOR;KSR 1002 TAPG	
Q3217	62147-101-950	TRANSISTOR;KSA 643-Y TAPG	
Q3401	62137-103-380	TRANSISTOR;KSA 733-Y TAPG	
Q3402	62137-302-740	TRANSISTOR;KSC 945-Y TAPG	
Q3403	62137-701-013	TRANSISTOR;KSR 1004 TAPG	
Q3404	62137-103-380	TRANSISTOR;KSA 733-Y TAPG	
Q3405	62137-302-740	TRANSISTOR;KSC 945-Y TAPG	
Q3406	62137-302-740	TRANSISTOR;KSC 945-Y TAPG	
Q3407	62137-302-740	TRANSISTOR;KSC 945-Y TAPG	
Q3409	62137-302-740	TRANSISTOR;KSC 945-Y TAPG	
Q3411	62137-103-380	TRANSISTOR;KSA 733-Y TAPG	

LOCA.NO	PART-NUMBER	DESCRIPTION;SPECIFICATION	REMARK
Q3501	62137-702-020	TRANSISTOR;KSC [illegible] TAPG	
Q3502	62137-302-740	TRANSISTOR;KSC [illegible] TAPG	
Q3503	62137-103-380	TRANSISTOR;KSA [illegible] TAPG	
R3201	61048-177-203	R-METAL FILM;RM 1/8TS 20K-J	
R3202	61048-177-472	R-METAL FILM;RM 1/8TS 4.7K-J	
R3203	61048-177-223	R-METAL FILM;RM 1/8TS 22K-J	
R3204	61048-177-473	R-METAL FILM;RM 1/8TS 47K-J	
R3205	61048-177-222	R-METAL FILM;RM 1/8TS 2.2K-J	
R3206	61048-177-181	R-METAL FILM;RM 1/8TS 180-J	
R3207	61048-177-821	R-METAL FILM;RM 1/8TS 820-J	
R3208	61048-177-391	R-METAL FILM;RM 1/8TS 390-J	
R3209	61048-177-182	R-METAL FILM;RM 1/8TS 1.8K-J	
R3210	61048-177-182	R-METAL FILM;RM 1/8TS 1.8K-J	
R3211	61048-177-102	R-METAL FILM;RM 1/8TS 1K-J	
R3212	61048-177-222	R-METAL FILM;RM 1/8TS 2.2K-J	
R3213	61048-177-333	R-METAL FILM;RM 1/8TS 33K-J	
R3214	61048-177-153	R-METAL FILM;RM 1/8TS 15K-J	
R3215	61048-177-153	R-METAL FILM;RM 1/8TS 15K-J	
R3216	61048-177-474	R-METAL FILM;RM 1/8TS 470K-J	
R3217	61048-177-123	R-METAL FILM;RM 1/8TS 12K-J	
R3218	61048-177-362	R-METAL FILM;RM 1/8TS 3.6K-J	
R3219	61048-177-122	R-METAL FILM;RM 1/8TS 1.2K-J	
R3221	61048-177-333	R-METAL FILM;RM 1/8TS 33K-J	
R3222	61048-177-301	R-METAL FILM;RM 1/8TS 300-J	
R3223	61048-177-681	R-METAL FILM;RM 1/8TS 680-J	
R3225	61048-177-682	R-METAL FILM;RM 1/8TS 6.8K-J	
R3226	61048-177-222	R-METAL FILM;RM 1/8TS 2.2K-J	
R3227	61048-177-475	R-METAL FILM;RM 1/8TS 4.7M-J	
R3228	61048-177-105	R-METAL FILM;RM 1/8TS 1M-J	
R3229	61048-177-105	R-METAL FILM;RM 1/8TS 1M-J	
R3230	61048-177-561	R-METAL FILM;RM 1/8TS 560-J	
R3231	61048-177-681	R-METAL FILM;RM 1/8TS 680-J	
R3232	61048-177-272	R-METAL FILM;RM 1/8TS 2.7K-J	
R3233	61048-177-472	R-METAL FILM;RM 1/8TS 4.7K-J	
R3235	61048-177-682	R-METAL FILM;RM 1/8TS 6.8K-J	
R3236	61048-177-102	R-METAL FILM;RM 1/8TS 1K-J	
R3237	61048-177-272	R-METAL FILM;RM 1/8TS 2.7K-J	
R3238	61048-177-102	R-METAL FILM;RM 1/8TS 1K-J	
R3239	61048-177-112	R-METAL FILM;RM 1/8TS 1.1K-J	
R3240	61048-177-472	R-METAL FILM;RM 1/8TS 4.7K-J	
R3241	61048-177-152	R-METAL FILM;RM 1/8TS 1.5K-J	
R3242	61048-177-272	R-METAL FILM;RM 1/8TS 2.7K-J	
R3243	61048-177-272	R-METAL FILM;RM 1/8TS 2.7K-J	
R3244	61048-177-472	R-METAL FILM;RM 1/8TS 4.7K-J	
R3247	61048-177-561	R-METAL FILM;RM 1/8TS 560-J	
R3248	61048-177-102	R-METAL FILM;RM 1/8TS 1K-J	
R3401	61048-177-102	R-METAL FILM;RM 1/8TS 1K-J	
R3402	61048-177-102	R-METAL FILM;RM 1/8TS 1K-J	
R3403	61048-177-224	R-METAL FILM;RM 1/8TS 220K-J	
R3404	61048-177-104	R-METAL FILM;RM 1/8TS 100K-J	
R3405	61048-177-152	R-METAL FILM;RM 1/8TS 1.5K-J	
R3406	61048-177-392	R-METAL FILM;RM 1/8TS 3.9K-J	
R3407	61048-177-822	R-METAL FILM;RM 1/8TS 8.2K-J	
R3408	61048-177-223	R-METAL FILM;RM 1/8TS 22K-J	
R3409	61048-177-122	R-METAL FILM;RM 1/8TS 1.2K-J	
R3410	61048-177-223	R-METAL FILM;RM 1/8TS 22K-J	
R3411	61048-177-102	R-METAL FILM;RM 1/8TS 1K-J	
R3412	61048-177-153	R-METAL FILM;RM 1/8TS 15K-J	
R3413	61048-177-273	R-METAL FILM;RM 1/8TS 27K-J	
R3414	61048-177-273	R-METAL FILM;RM 1/8TS 27K-J	
R3415	61048-177-123	R-METAL FILM;RM 1/8TS 12K-J	
R3416	61048-177-102	R-METAL FILM;RM 1/8TS 1K-J	
R3417	61048-177-331	R-METAL FILM;RM 1/8TS 330-J	
R3418	61048-177-102	R-METAL FILM;RM 1/8TS 1K-J	
R3419	61048-177-102	R-METAL FILM;RM 1/8TS 1K-J	
R3420	61048-177-681	R-METAL FILM;RM 1/8TS 680-J	
R3421	61048-177-331	R-METAL FILM;RM 1/8TS 330-J	
R3422	61048-177-102	R-METAL FILM;RM 1/8TS 1K-J	
R3423	61048-177-392	R-METAL FILM;RM 1/8TS 3.9K-J	
R3424	61048-177-152	R-METAL FILM;RM 1/8TS 1.5K-J	
R3425	61048-177-391	R-METAL FILM;RM 1/8TS 390-J	
R3426	61048-177-221	R-METAL FILM;RM 1/8TS 220-J	
R3427	61048-177-821	R-METAL FILM;RM 1/8TS 820-J	
R3430	61048-177-102	R-METAL FILM;RM 1/8TS 1K-J	
R3431	61048-177-473	R-METAL FILM;RM 1/8TS 47K-J	
R3434	61048-177-271	R-METAL FILM;RM 1/8TS 270-J	
R3437	61048-177-222	R-METAL FILM;RM 1/8TS 2.2K-J	
R3438	61048-177-332	R-METAL FILM;RM 1/8TS 3.3K-J	
R3439	61048-177-102	R-METAL FILM;RM 1/8TS 1K-J	
R3501	61048-177-103	R-METAL FILM;RM 1/8TS 10K-J	
R3502	61048-177-750	R-METAL FILM;RM 1/8TS 75-J	
R3503	61048-177-750	R-METAL FILM;RM 1/8TS 75-J	
R3504	61048-177-103	R-METAL FILM;RM 1/8TS 10K-J	
R3506	61048-177-471	R-METAL FILM;RM 1/8TS 470-J	
R3507	61048-177-471	R-METAL FILM;RM 1/8TS 470-J	
R3508	61048-177-471	R-METAL FILM;RM 1/8TS 470-J	
R3509	61048-177-750	R-METAL FILM;RM 1/8TS 75-J	
R3510	61048-177-681	R-METAL FILM;RM 1/8TS 680-J	
R3511	61048-177-391	R-METAL FILM;RM 1/8TS 390-J	
R3512	61048-177-151	R-METAL FILM;RM 1/8TS 150-J	

LOCA.NO	PART-NUMBER	DESCRIPTION;SPECIFICATION	REMARK
VR3201	61247-[illegible]01-472	VR-SEMI;EVN-DJA A03 B03 TAPG 4.7KB	
VR3202	61247-[illegible]01-472	VR-SEMI;EVN-DJA A03 B03 TAPG 4.7KB	
VR3203	61247-[illegible]01-T02	VR-SEMI;EVN-DJA A03 B13 TAPG 1KB	
X3401	64539-[illegible]12-079	X-TAL;4.43 3619MHZ 8PPM TAPG	
ZD3201	62169-403-301	DIODE-ZENER;UZ 5.0B TAPG	
		VIDEO PARTS : UNIQUE PARTS OF VX-1560/1561	
C3432	61407-117-104	C-CERAMIC.AXIAL;CAX [illegible]PG 16V 0.01-N	
C3434	61637-204-330	C-ELEC;CEAP 16V 33M S[illegible]	
C3435	61637-206-100	C-ELEC;CEAP 35V 10M SA(5X11)	
C3438	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N	
C3505	61637-504-221	C-ELEC;CEAP 16V 220M SG(8X11.5)	
FL3402	64529-310-010	FILTER-CERAMIC;SFE 4.5MB	
IC3402	62119-103-694	IC;BA7025L	
L3502	62427-812-821	COIL-PEAKING;EL0606RA 820uH-J	
Q3413	62137-302-740	TRANSISTOR;KSC 945-Y TAPG	
Q3414	62137-701-013	TRANSISTOR;KSR 1004 TAPG	
Q3416	62137-701-013	TRANSISTOR;KSR 1004 TAPG	
R3441	61048-177-103	R-METAL FILM;RM 1/8TS 10K-J	
R3442	61048-177-102	R-METAL FILM;RM 1/8TS 1K-J	
R3443	61048-177-823	R-METAL FILM;RM 1/8TS 82K-J	
R3444	61048-177-103	R-METAL FILM;RM 1/8TS 10K-J	
R3445	61048-177-103	R-METAL FILM;RM 1/8TS 10K-J	
R3446	61048-177-153	R-METAL FILM;RM 1/8TS 15K-J	
R3447	61048-177-562	R-METAL FILM;RM 1/8TS 5.6K-J	
R3448	61048-177-103	R-METAL FILM;RM 1/8TS 10K-J	
R3450	61048-177-154	R-METAL FILM;RM 1/8TS 150K-J	
R3451	61048-177-222	R-METAL FILM;RM 1/8TS 2.2K-J	
R3452	61048-177-102	R-METAL FILM;RM 1/8TS 1K-J	
R3452	61048-177-102	R-METAL FILM;RM 1/8TS 1K-J	
R3453	61048-177-223	R-METAL FILM;RM 1/8TS 22K-J	
R3455	61048-177-222	R-METAL FILM;RM 1/8TS 2.2K-J	
T3401	62429-014-112	COIL-TRAP(1/2FH);7.8K TUNING-COIL	
		VIDEO PARTS : UNIQUE PARTS OF VI-1560	
C3505	61637-504-101	C-ELEC;CEAP 16V 100M SG (6.3X11)	
L3502	62427-812-101	COIL-PEAKING;EL0606RA 100uH-J	
		TUNER PARTS : VX-1560/1561	
	64519-903-170	TUNER;ECC-2885PLE	
	62569-002-284	RF-CONVERTER;RMUS23655EA	
	63054-401-821	COAXIAL-CABLE ASSY;7/0.16 300V BLK 180AA	
C3520	61407-105-320	C-CERAMIC.TEMP;CC45 CH TAPG 50V 82-J	
C401	61407-105-270	C-CERAMIC.TEMP;CC45 CH TAPG 50V 27-J	
C402	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N	
C403	61407-105-270	C-CERAMIC.TEMP;CC45 CH TAPG 50V 27-J	
C404	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N	
C405	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N	
C406	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N	
C407	61407-105-270	C-CERAMIC.TEMP;CC45 CH TAPG 50V 27-J	
C408	61407-101-200	C-CERAMIC.TEMP;CC45 SL TAPG 50V 22-J	
C409	61407-105-250	C-CERAMIC.TEMP;CC45 CH TAPG 50V 39-J	
C410	61607-421-120	C-ELECTROLYTIC;LC-0511-4.7-50-M TAPG	
C411	61507-121-390	C-POLYESTER;C0921M TAPG 100V 222-K	
C412	61507-121-470	C-POLYESTER;C0921M TAPG 100V 103-K	
C413	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N	
C414	61607-421-130	C-ELECTROLYMIC;LC-0511-47-16-M TAPG	
C415	61637-208-100	C-ELEC;CEAP 50V 10M SA(5X11)	
C416	61407-117-228	C-CERAMIC.AXIAL;CAX SL TAPG 50V 223-Z	
C417	61407-101-160	C-CERAMIC.TEMP;CC45 SL TAPG 50V 15-J	
C418	61507-121-920	C-POLYESTER;C0921M TAPG 100V 104-M	
C419	61637-208-478	C-ELEC;CEAP 50V 0.47M SA(5X11)	
C420	61637-208-010	C-ELEC;CEAP 50V 1M SA(5X11)	
C421	61417-101-110	C-CERAMIC.TEMP;CC45 SL TAPG 50V 6-D	
C422	61617-404-100	C-ELEC;CEAP 16V 10M RSS(4X7)	
FL401	62429-832-020	COIL-TRAP;DAISIN 40.4MHZ(G-5.7)	
FL402	62429-832-010	COIL-TRAP;DAESIN 32.4MHZ(G-7)	
FL403	62429-832-080	COIL VARIABLE;1.2UH PSF MATCH	
FL404	62719-049-012	TRANS-RESONANT(T1);40MHZ V-DET	
FL405	64529-421-020	CERAMIC-TRAP;TPS-6.0MB	
FL406	64529-421-021	CERAMIC-TRAP;TPS-5.5MB	
FL407	64529-425-070	FILTER-CERAMIC;CDA 5.5ME21	
FL408	64529-310-012	FILTER-CERAMIC;SFE-5.5MB	
FL409	62719-049-013	TRANS-AFT(T2);40MHZ AFT-BAL	
FL410	64529-418-041	FILTER-SAW;TSF-1303	
IC401	62119-103-721	IC;LA7545	
L401	62427-812-188	COIL PEAKING;EL0606RA 0.47uH-M	
L402	62427-812-229	COIL-PEAKING;EL0606RA 2.2uH-K	
L403	62427-812-101	COIL-PEAKING;EL0606RA 100uH-J	
L404	62427-812-220	COIL-PEAKING;EL0606RA 22uH-J	
L405	62427-812-220	COIL-PEAKING;EL0606RA 22uH-J	
L406	62427-812-270	COIL-PEAKING;EL0606RA 27uH-J	
L407	62427-812-829	COIL PEAKING;EL0606RA 8.2uH-J	
Q401	62137-702-010	TRANSISTOR;NTC 388ATM TAPG	
Q402	62137-302-740	TRANSISTOR;KSC 945-Y TAPG	
R401	61048-177-101	R-METAL FILM;RM 1/8TS 100-J	
R402	61048-177-220	R-METAL FILM;RM 1/8TS 22-J	

LOCA NO	PART-NUMBER	DESCRIPTION;SPECIFICATION	REMARK
R403	61048-177-101	R-METAL FILM;RM 1/8TS 100-J	
R404	61048-177-331	R-METAL FILM;RM 1/8TS 330-J	
R405	61048-177-562	R-METAL FILM;RM 1/8TS 5.6K-J	
R406	61048-177-681	R-METAL FILM;RM 1/8TS 680-J	
R407	61048-177-122	R-METAL FILM;RM 1/8TS 1.2K-J	
R408	61048-177-820	R-METAL FILM;RM 1/8TS 82-J	
R409	61048-177-102	R-METAL FILM;RM 1/8TS 1K-J	
R410	61048-177-152	R-METAL FILM;RM 1/8TS 1.5K-J	
R411	61048-177-271	R-METAL FILM;RM 1/8TS 270-J	
R412	61048-177-272	R-METAL FILM;RM 1/8TS 2.7K-J	
R413	61048-177-151	R-METAL FILM;RM 1/8TS 150-J	
R414	61048-177-151	R-METAL FILM;RM 1/8TS 150-J	
R415	61048-177-102	R-METAL FILM;RM 1/8TS 1K-J	
R416	61048-177-393	R-METAL FILM;RM 1/8TS 39K-J	
R417	61048-177-821	R-METAL FILM;RM 1/8TS 820-J	
R418	61048-177-562	R-METAL FILM;RM 1/8TS 5.6K-J	
R419	61048-177-224	R-METAL FILM;RM 1/8TS 220K-J	
R420	61048-177-224	R-METAL FILM;RM 1/8TS 220K-J	
R421	61048-177-104	R-METAL FILM;RM 1/8TS 100K-J	
R422	61048-177-472	R-METAL FILM;RM 1/8TS 4.7K-J	
R423	61048-177-123	R-METAL FILM;RM 1/8TS 12K-J	
R424	61048-277-222	R-METAL FILM;RM 1/4T 2.2K-J	
R425	61048-177-272	R-METAL FILM;RM 1/8TS 2.7K-J	
VR401	61247-101-103	VR-SEMI;EVN-DJA A03 B14 TAPG 10KB	
ZD401	62119-501-561	IC-L;KA33V TAPG	

TUNER PARTS : VI-1560

	64519-903-195	TUNER;TERB 7X004A	
	62569-002-300	RF-CONVERTER;MDLK58523A	
	63054-401-821	COAXIAL-CABLE ASSY;7/0.16 300V BLK 180AA	
C3520	61407-105-320	C-CERAMIC.TEMP;CC45 CH TAPG 50V 82-J	
C402	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-M	
C404	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-M	
C405	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-M	
C406	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-M	
C407	61417-101-110	C-CERAMIC.TEMP;CC45 SL TAPG 50V 6-D	
C408	61407-101-200	C-CERAMIC.TEMP;CC45 SL TAPG 50V 22-J	
C409	61407-105-250	C-CERAMIC.TEMP;CC45 CH TAPG 50V 3S-J	
C410	61607-421-120	C-ELECTROLYTIC;LC-0511-4.7-50-M TAPG	
C411	61507-121-390	C-POLYESTER;C0921M TAPG 100V 222-K	
C412	61507-121-470	C-POLYESTER;C0921M TAPG 100V 103-K	
C413	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-M	
C414	61607-421-130	C-ELECTROLYTIC;LC-0511-47-16-M TAPG	
C415	61697-208-100	C-ELEC;CEAP 50V 10M SA(5X11)	
C416	61407-117-228	C-CERAMIC.AXIAL;CAX SL TAPG 50V 223-Z	
C417	61407-101-160	C-CERAMIC.TEMP;CC45 SL TAPG 50V 15-J	
C418	61507-121-920	C-POLYESTER;C0S21M TAPG 100V 104-M	
C419	61637-208-478	C-ELEC;CEAP 50V 0.47M SA(5X11)	
C420	61637-208-010	C-ELEC;CEAP 50V 1M SA(5X11)	
C421	61409-105-170	C-CERAMIC.TEMP;CC45 CH 50V 20-J	
C422	61617-404-100	C-ELEC;CEAP 16V 10M RSS(4X7)	
FL403	62429-832-080	COIL VARIABLE;1.2UH PSF MATCH	
FL404	62719-049-012	TRANS-RESONANT(TI);40MHZ V-DET	
FL405	64529-421-020	CERAMIC-TRAP;TPS-6.0MB	
FL407	64529-310-021	FILTER CERAMIC DISCRIMINATOR;CDA 6.0 ME	
FL408	64529-310-011	FILTER-CERAMIC;SFE-6.0MB	
FL409	62719-049-013	TRANS-AFT(T2);40MHZ AFT-BAL	
FL410	64529-418-040	FILTER-SAW;TSF 1306	
IC401	62119-103-721	IC;LA7545	
L402	62427-812-229	COIL-PEAKING;ELO606RA 2.2uH-K	
L403	62427-812-101	COIL-PEAKING;ELO606RA 100uH-J	
L404	62427-812-220	COIL-PEAKING;ELO606RA 22uH-J	
L405	62427-812-220	COIL-PEAKING;ELO606RA 22uH-J	
L406	62427-812-270	COIL-PEAKING;ELO606RA 27uH-J	
L407	62427-812-150	COIL-PEAKING;ELO606RA 15uH-J	
Q401	62137-702-010	TRANSISTOR;KTC 388ATM TAPG	
Q402	62137-302-740	TRANSISTOR;KSC 945-Y TAPG	
R401	61048-177-101	R-METAL FILM;RM 1/8TS 100-J	
R404	61048-177-331	R-METAL FILM;RM 1/8TS 330-J	
R405	61048-177-562	R-METAL FILM;RM 1/8TS 5.6K-J	
R406	61048-177-681	R-METAL FILM;RM 1/8TS 680-J	
R407	61048-177-122	R-METAL FILM;RM 1/8TS 1.2K-J	
R408	61048-177-820	R-METAL FILM;RM 1/8TS 82-J	
R409	61048-177-102	R-METAL FILM;RM 1/8TS 1K-J	
R410	61048-177-152	R-METAL FILM;RM 1/8TS 1.5K-J	
R411	61048-177-271	R-METAL FILM;RM 1/8TS 270-J	
R412	61048-177-222	R-METAL FILM;RM 1/8TS 2.2K-J	
R413	61048-177-151	R-METAL FILM;RM 1/8TS 150-J	
R414	61048-177-151	R-METAL FILM;RM 1/8TS 150-J	
R415	61048-177-102	R-METAL FILM;RM 1/8TS 1K-J	
R416	61048-177-393	R-METAL FILM;RM 1/8TS 39K-J	
R417	61048-177-821	R-METAL FILM;RM 1/8TS 820-J	
R418	61048-177-562	R-METAL FILM;RM 1/8TS 5.6K-J	
R419	61048-177-224	R-METAL FILM;RM 1/8TS 220K-J	
R420	61048-177-224	R-METAL FILM;RM 1/8TS 220K-J	
R421	61048-177-104	R-METAL FILM;RM 1/8TS 100K-J	
R422	61048-177-472	R-METAL FILM;RM 1/8TS 4.7K-J	
R423	61048-177-123	R-METAL FILM;RM 1/8TS 12K-J	
R424	61048-277-222	R-METAL FILM;RM 1/4T 2.2K-J	

LOCA NO	PART-NUMBER	DESCRIPTION;SPECIFICATION	REMARK
R425	61048-177-272	R-METAL FILM;RM 1/8TS 2.7K-J	
VR401	61247-101-103	VR-SEMI;EVN-DJA A03 B14 TAPG 10KB	
ZD401	62119-501-561	IC-L;KA33V TAPG	

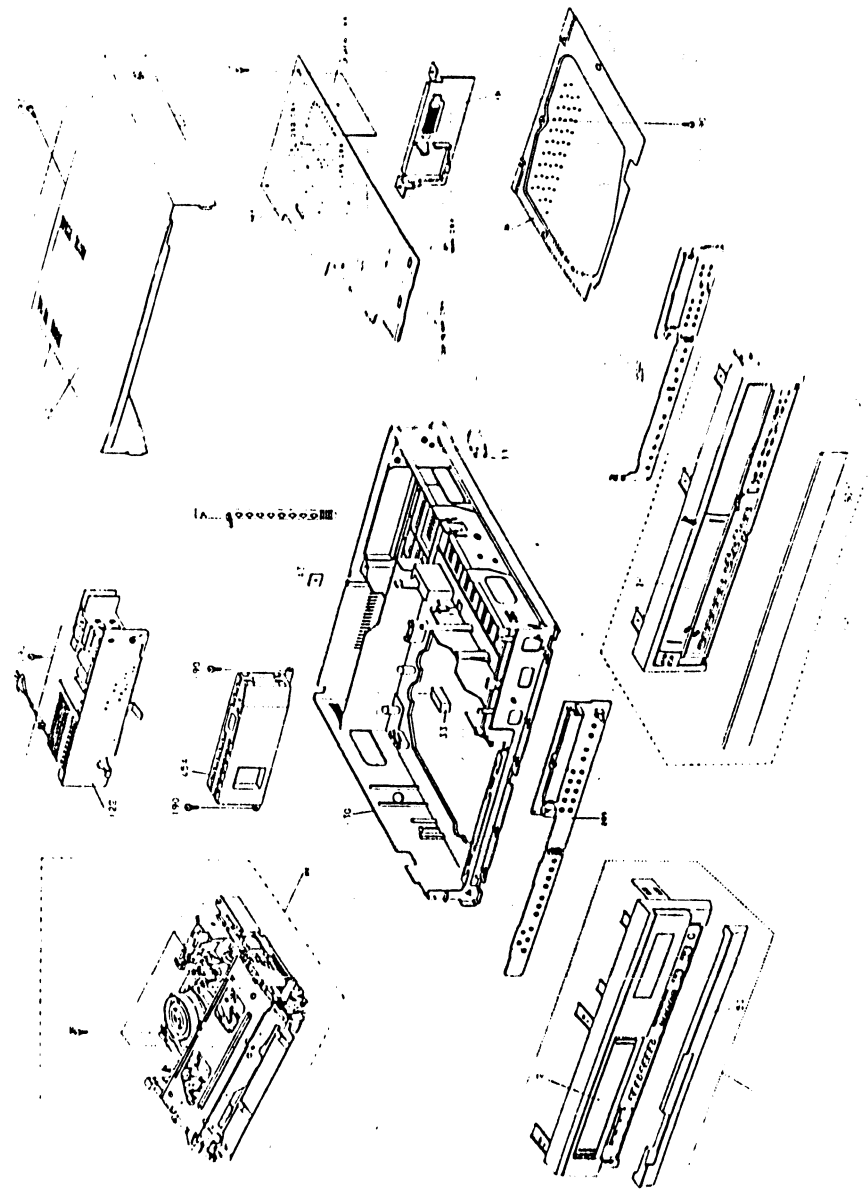
AUDIO PARTS

C501	61637-206-100	C-ELEC;CEAP 35V 10M SA(5X11)
C502	61507-121-470	C-POLYESTER;C0921M TAPG 100V 103-K
C503	61637-204-330	C-ELEC;CEAP 16V 33M SA(5X11)
C504	61637-208-010	C-ELEC;CEAP 50V 1M SA(5X11)
C505	61637-208-478	C-ELEC;CEAP 50V 0.47M SA(5X11)
C506	61507-121-360	C-POLYESTER;C0921M TAPG 50V 152-K
C508	61507-121-371	C-POLYESTER;C0921M TAPG 50V 182-J
C509	61407-117-228	C-CERAMIC.AXIAL;CAX SL TAPG 50V 223-Z
C511	61507-121-480	C-POLYESTER;C0921M TAPG 100V 153-K
C512	61507-121-430	C-POLYESTER;C0921M TAPG 100V 472-K
C513	61507-121-470	C-POLYESTER;C0921M TAPG 100V 103-K
C514	61607-421-120	C-ELECTROLYTIC;LC-0511-4.7-50-M TAPG
C517	61507-121-531	C-POLYESTER;C0921M TAPG 50V 333-J
C518	61637-208-010	C-ELEC;CEAP 50V 1M SA(5X11)
C520	61607-421-130	C-ELECTROLYTIC;LC-0511-47-16-M TAPG
C522	61607-421-130	C-ELECTROLYTIC;LC-0511-47-16-M TAPG
C523	61637-206-100	C-ELEC;CEAP 35V 10M SA(5X11)
C524	61407-101-480	C-CERAMIC.TEMP;CC45 SL TAPG 50V 330-J
C525	61507-339-010	C-POLYESTER;MDX 100V TAPG 473-K
C526	61607-421-130	C-ELECTROLYTIC;LC-0511-47-16-M TAPG
C527	61507-121-430	C-POLYESTER;C0921M TAPG 100V 472-K
C528	61507-121-450	C-POLYESTER;C0921M TAPG 50V 682-K
C529	61617-404-100	C-ELEC;CEAP 16V 10M RSS(4X7)
C530	61507-121-630	C-POLTESTER;C0921M TAPG 100V 123-K
C531	61637-208-229	C-ELEC;CEAP 50V 2.2M SA (5X11)
C534	61507-121-481	C-POLTESTER;C0921M TAPG 50V 153-J
C535	61407-105-320	C-CERAMIC.TEMP;CC45 CH TAPG 50V 82-J
C536	61407-105-320	C-CERAMIC.TEMP;CC45 CH TAPG 50V 82-J
CN501	63053-917-493	LEAD CONNECTOR ASSY;1533 #26 5231-07/500
D501	62169-406-482	DIODE;1N4148 SAMSUNG
IC501	62119-103-685	IC;LA7295
L501	62429-010-280	COIL-PEAKING;B0AM-22mH
L502	62427-813-153	COIL-PEAKING;ELO607RA 15uH-J
L503	62429-833-101	COIL-PEAKING AXIAL;BAL04ST 101K
L504	62427-813-101	COIL-PEAKING;ELO607RA 100uH-K
Q501	62137-701-011	TRANSISTOR;KSR 1002 TAPG
Q502	62137-701-011	TRANSISTOR;KSR 1002 TAPG
Q503	62137-702-020	TRANSISTOR;KSC 1008-Y TAPG
Q504	62137-702-020	TRANSISTOR;KSC 1008-Y TAPG
Q507	62137-702-020	TRANSISTOR;KSC 1008-Y TAPG
R501	61048-177-101	R-METAL FILM;RM 1/8TS 100-J
R502	61048-177-183	R-METAL FILM;RM 1/8TS 18K-J
R503	61048-177-273	R-METAL FILM;RM 1/8TS 27K-J
R504	61048-177-333	R-METAL FILM;RM 1/8TS 33K-J
R505	61048-177-273	R-METAL FILM;RM 1/8TS 27K-J
R506	61048-177-273	R-METAL FILM;RM 1/8TS 27K-J
R507	61048-177-332	R-METAL FILM;RM 1/8TS 3.3K-J
R508	61048-177-273	R-METAL FILM;RM 1/8TS 27K-J
R509	61048-177-223	R-METAL FILM;RM 1/8TS 22K-J
R510	61048-177-822	R-METAL FILM;RM 1/8TS 8.2K-J
R511	61048-177-475	R-METAL FILM;RM 1/8TS 4.7M-J
R512	61048-177-512	R-METAL FILM;RM 1/8TS 5.1K-J
R513	61048-177-334	R-METAL FILM;RM 1/8TS 330K-J
R514	61048-177-822	R-METAL FILM;RM 1/8TS 8.2K-J
R515	61048-177-101	R-METAL FILM;RM 1/8TS 100-J
R516	61048-177-821	R-METAL FILM;RM 1/8TS 820-J
R517	61048-177-152	R-METAL FILM;RM 1/8TS 1.5K-J
R518	61048-177-473	R-METAL FILM;RM 1/8TS 47K-J
R521	61048-177-821	R-METAL FILM;RM 1/8TS 820-J
R522	61048-177-333	R-METAL FILM;RM 1/8TS 33K-J
R523	61048-177-332	R-METAL FILM;RM 1/8TS 3.3K-J
R526	61048-177-391	R-METAL FILM;RM 1/8TS 390-J
R527	61048-177-203	R-METAL FILM;RM 1/8TS 20K-J
R529	61048-177-103	R-METAL FILM;RM 1/8TS 10K-J
R531	61048-177-303	R-METAL FILM;RM 1/8TS 30K-J
R533	61048-177-479	R-METAL FILM;RM 1/8TS 4.7-J
R534	61048-177-361	R-METAL FILM;RM 1/8TS 360-J
R535	61048-177-562	R-METAL FILM;RM 1/8TS 5.6K-J
R536	61048-177-562	R-METAL FILM;RM 1/8TS 5.6K-J
R537	61048-177-561	R-METAL FILM;RM 1/8TS 560-J
R538	61048-177-911	R-METAL FILM;RM 1/8TS 910-J
T501	62429-014-138	COIL-BIAS OSC;269QN-K5022YCT
VR501	61246-105-473	VR-SEMI;RH0615C 47KB
ZD501	62169-403-821	DIODE-ZENER;MTZ 5.1B

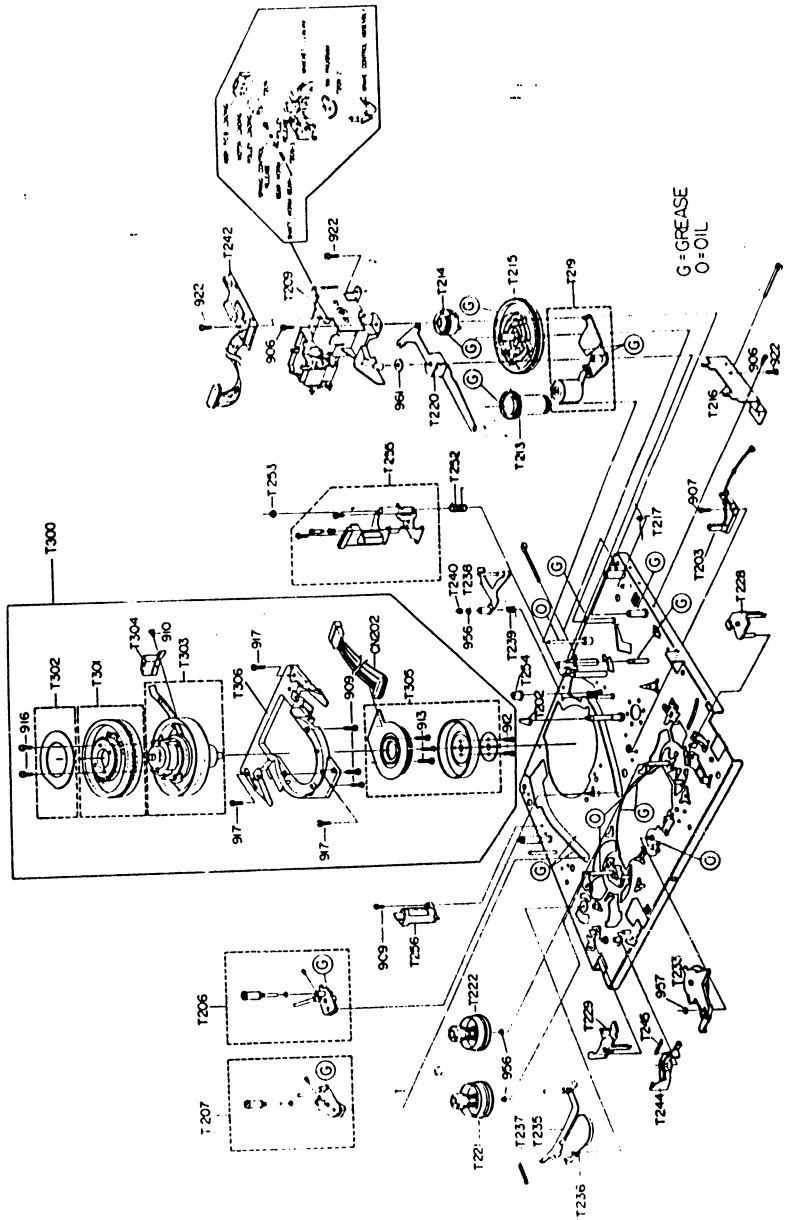
7. MECHNICAL EXPLODED VIEWS

		Page
7-1.	Instrument Assembly ----------	7-2
7-2.	Transport Mechanism Assembly-------	7-3
7-3.	Bottom Side Mechanism Assembly-----	7-4
7-4.	Housing Assembly ----------	7-5

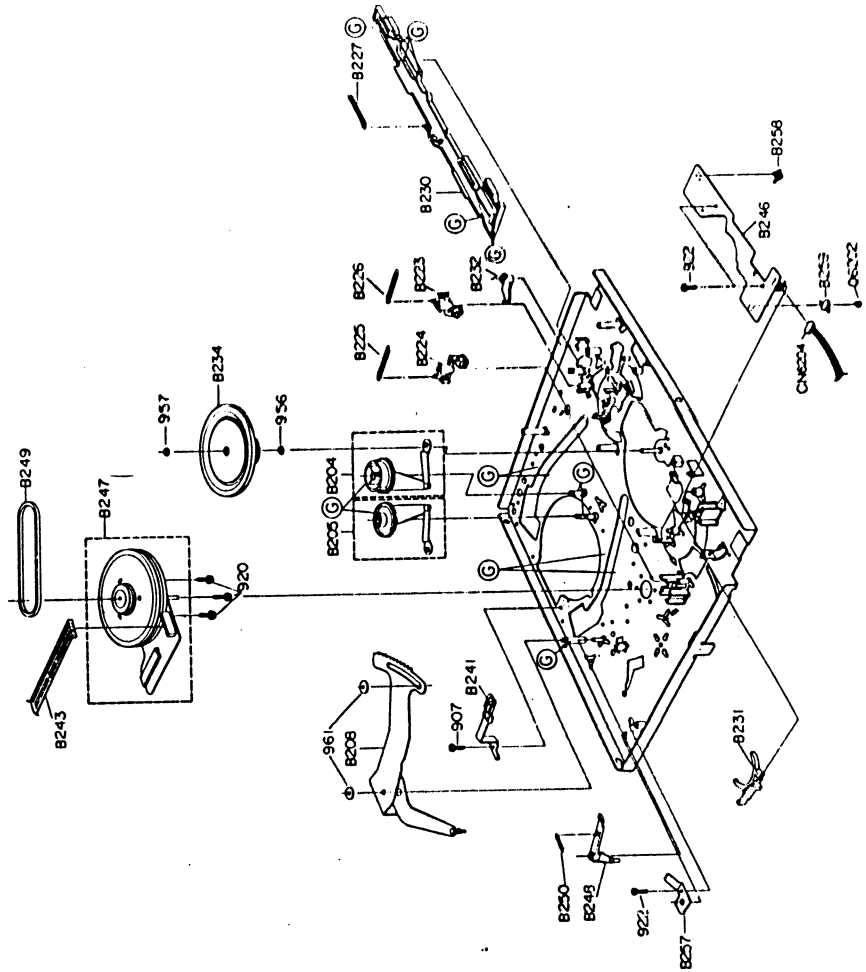
7-1. Instrument Assembly



7-2. Tranport Mechanism Assembly

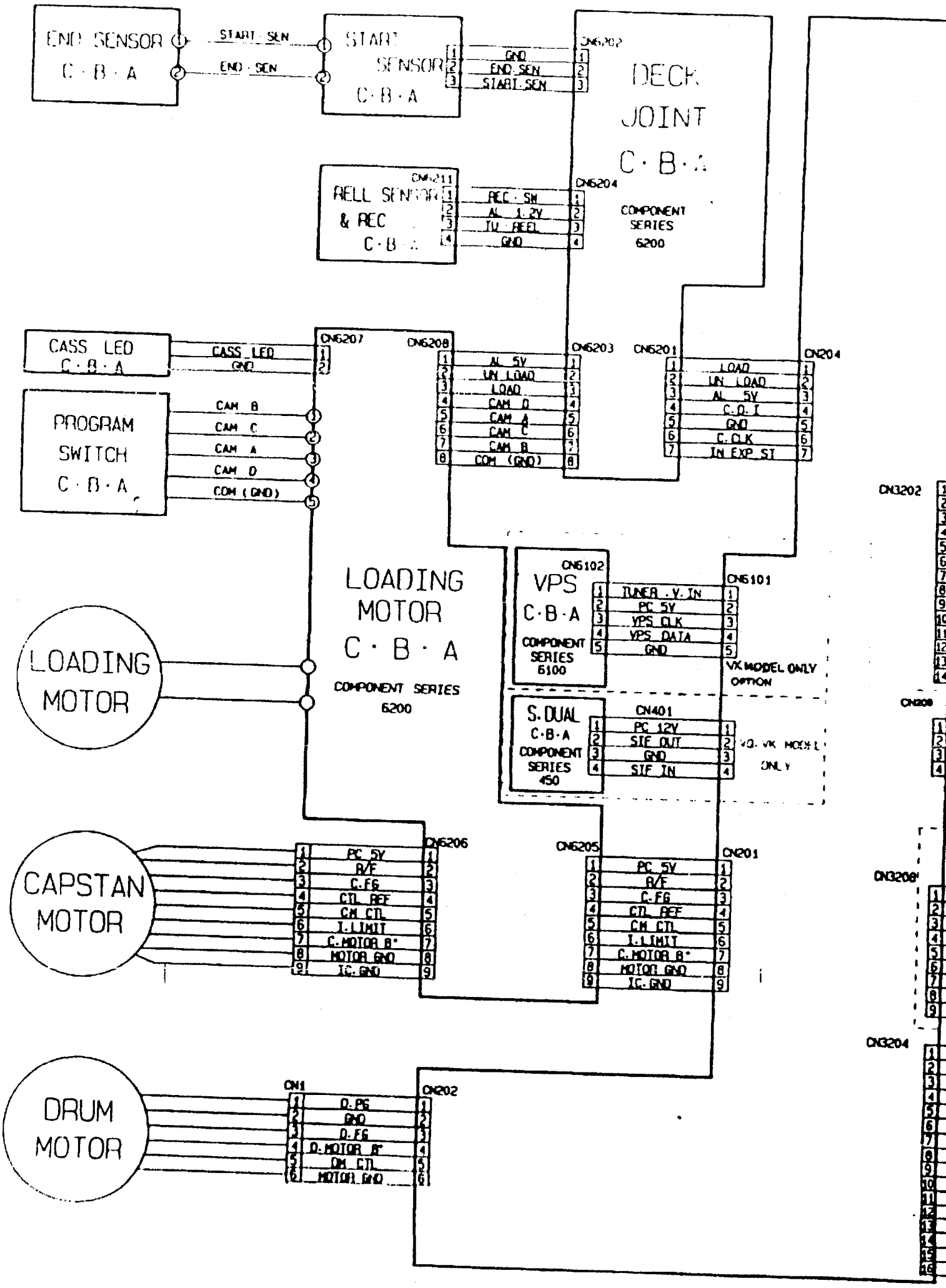


7-3. Bottom Side Mechanism Assembly



8. BLOCK DIAGRAMS

		Page
8-1.	Total Wiring Diagram	8-2
8-2.	Drum Phase Control	8-3
8-3.	Drum Speed Control	8-3
8-4.	Capstan Phase Control	8-4
8-5.	Capstan Speed Control	8-4
8-6.	Audio Playback Process	8-5
8-7.	Audio Record Process	8-5
8-8.	Luminance Playback Process	8-6
8-9.	Luminance Record Process	8-7
8-10.	Chrominance Playback Process	8-8
8-11.	Chrominance Record Process	8-9


END SENSOR
C · B · A
START SEN
END SEN
START SENSOR
C · B · A
CN6202
GND
END SEN
START SEN
DECK
JOINT
C · B · A
CN6211
REEL SENSOR
& REC
C · B · A
REC SW
AL 1.2V
TU REEL
GND
CN6204
COMPONENT
SERIES
6200
CASS LED
C · B · A
CASS LED
GND
CN6207
CN6208
CN6203
CN6201
CN204
AL 5V
UN LOAD
LOAD
CAM D
CAM A
CAM C
CAM B
COM (GND)
LOAD
UN LOAD
AL 5V
C.D.T
GND
C.CLK
IN EXP ST
PROGRAM
SWITCH
C · B · A
CAM B
CAM C
CAM A
CAM D
COM (GND)
LOADING
MOTOR
C · B · A
COMPONENT SERIES
6200
LOADING
MOTOR
CN6102
VPS
C·B·A
COMPONENT
SERIES
6100
TUNER .V.IN
PC 5V
VPS CLK
VPS DATA
GND
CN6101
VK MODEL ONLY
OPTION
S.DUAL
C·B·A
COMPONENT
SERIES
450
CN401
PC 12V
SIF OUT
GND
SIF IN
CAPSTAN
MOTOR
CN6206
PC 5V
B/F
C.FG
CTL REF
CM CTL
I.LIMIT
C.MOTOR B*
MOTOR GND
IC GND
CN6205
CN201
PC 5V
B/F
C.FG
CTL REF
CM CTL
I.LIMIT
C.MOTOR B*
MOTOR GND
IC GND
CN3202
CN3208
CN3204
DRUM
MOTOR
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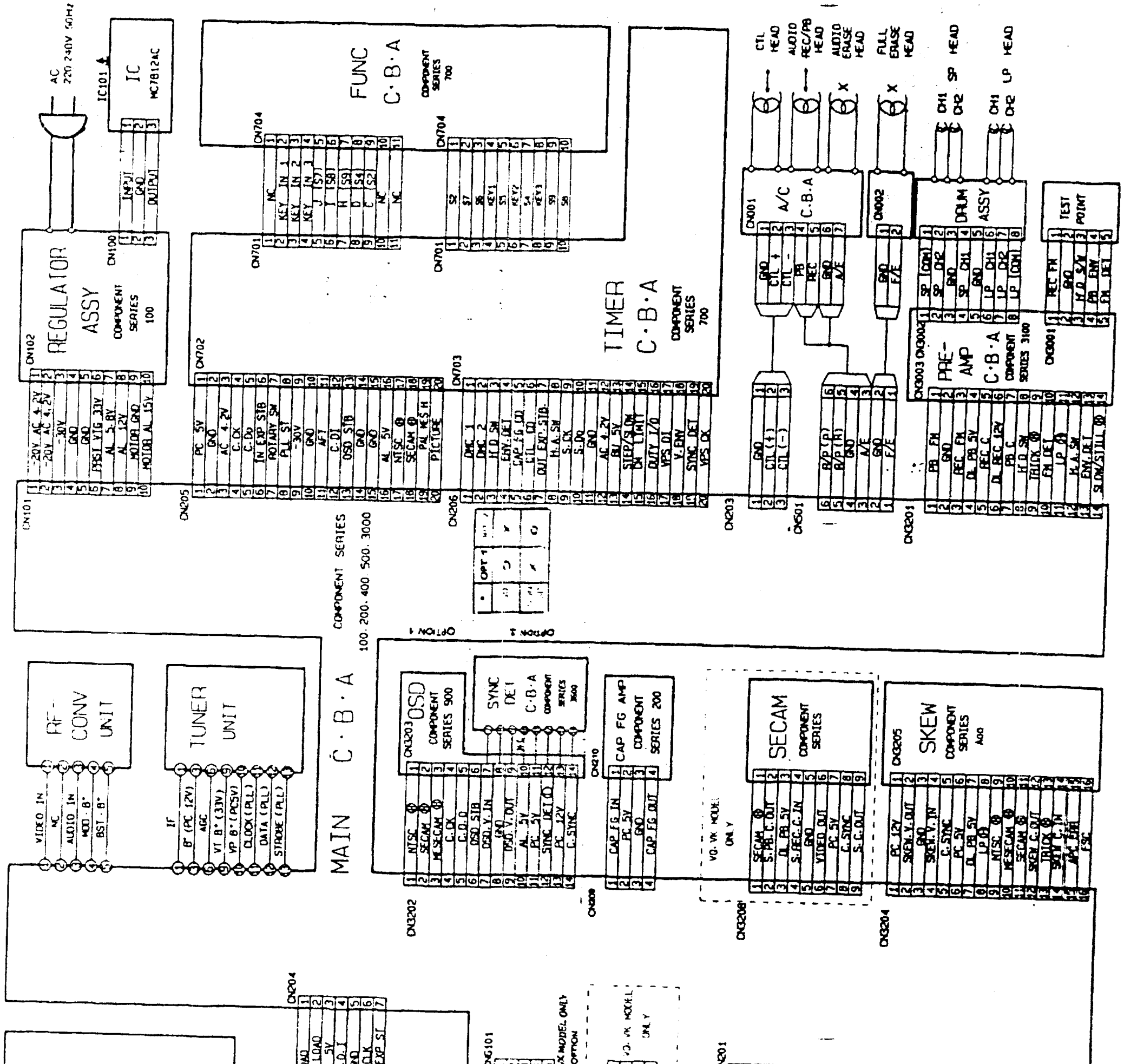
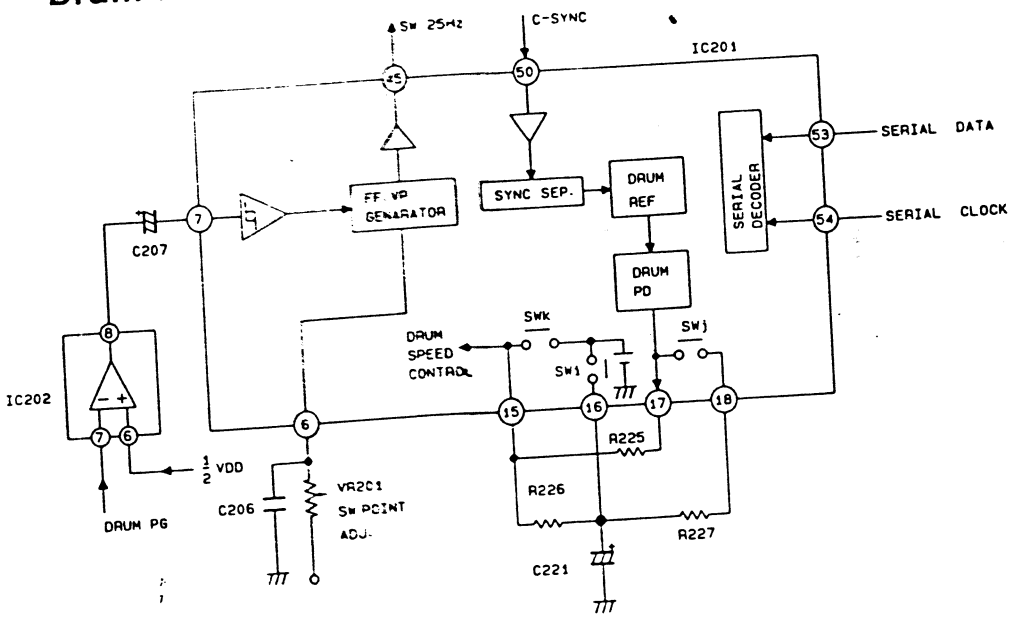
CN202
D.PG
GND
D.FG
D.MOTOR RF
CM CTL
MOTOR GND

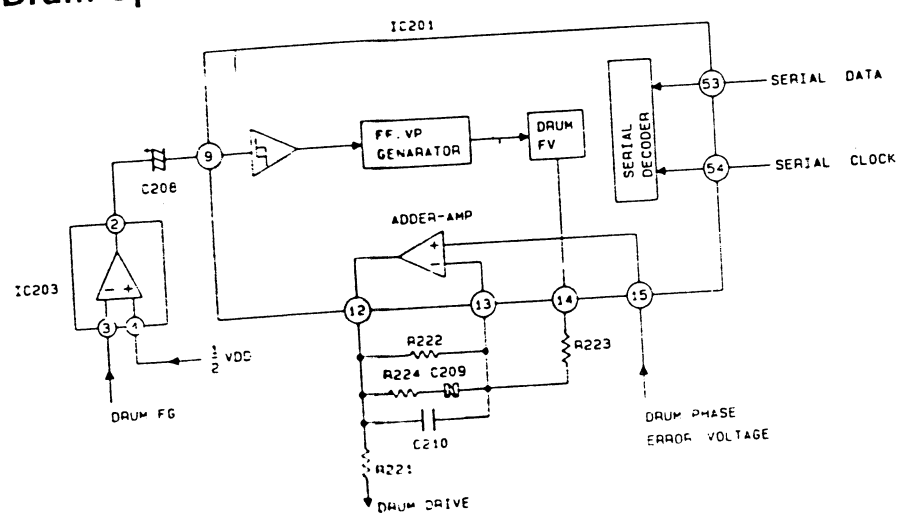
8-1. Total Wiring Diagram



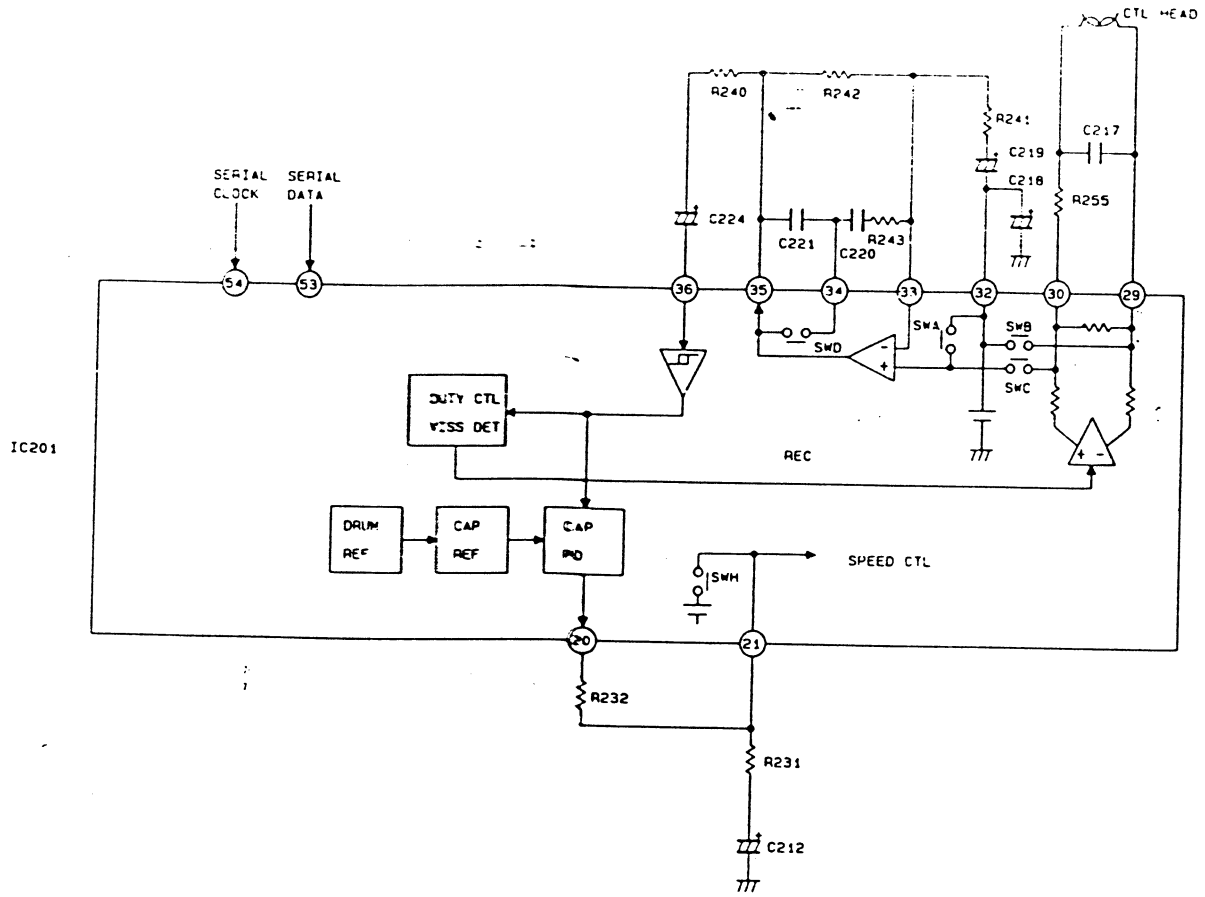
8-2. Drum Phase Control



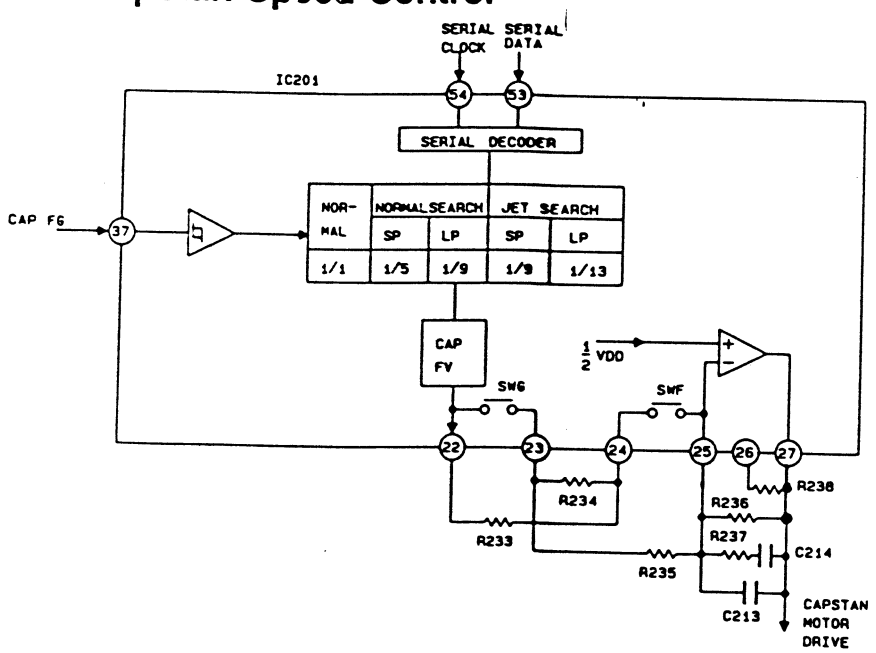
8-3. Drum Speed Control



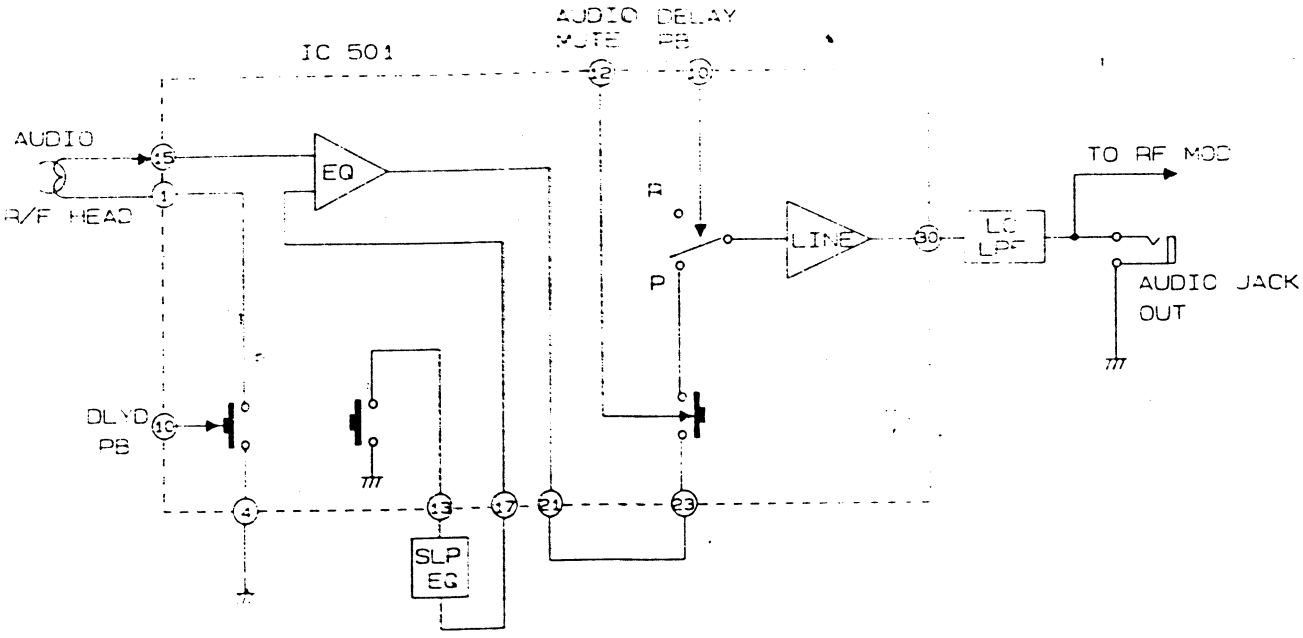
8-4. Capstan Phase Control



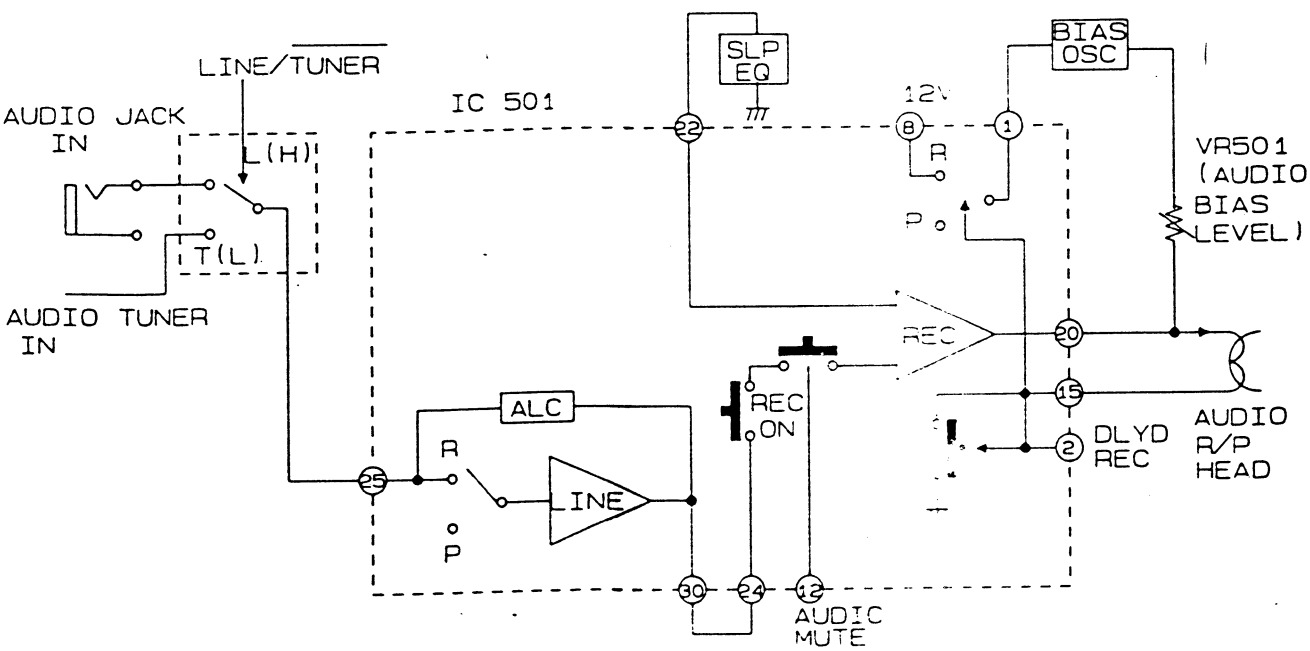
8-5. Capstan Speed Control



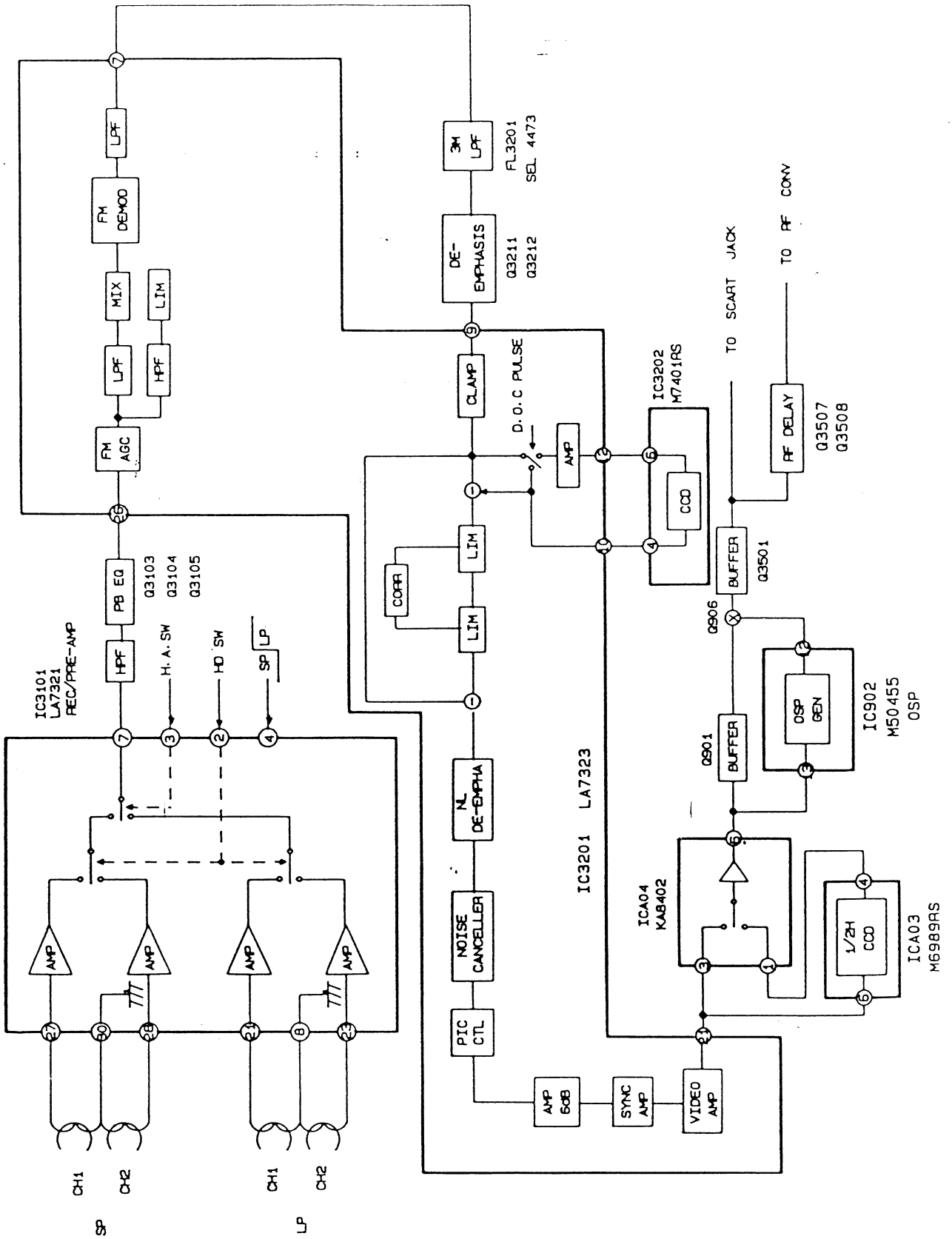
8-6. Audio Playback Process



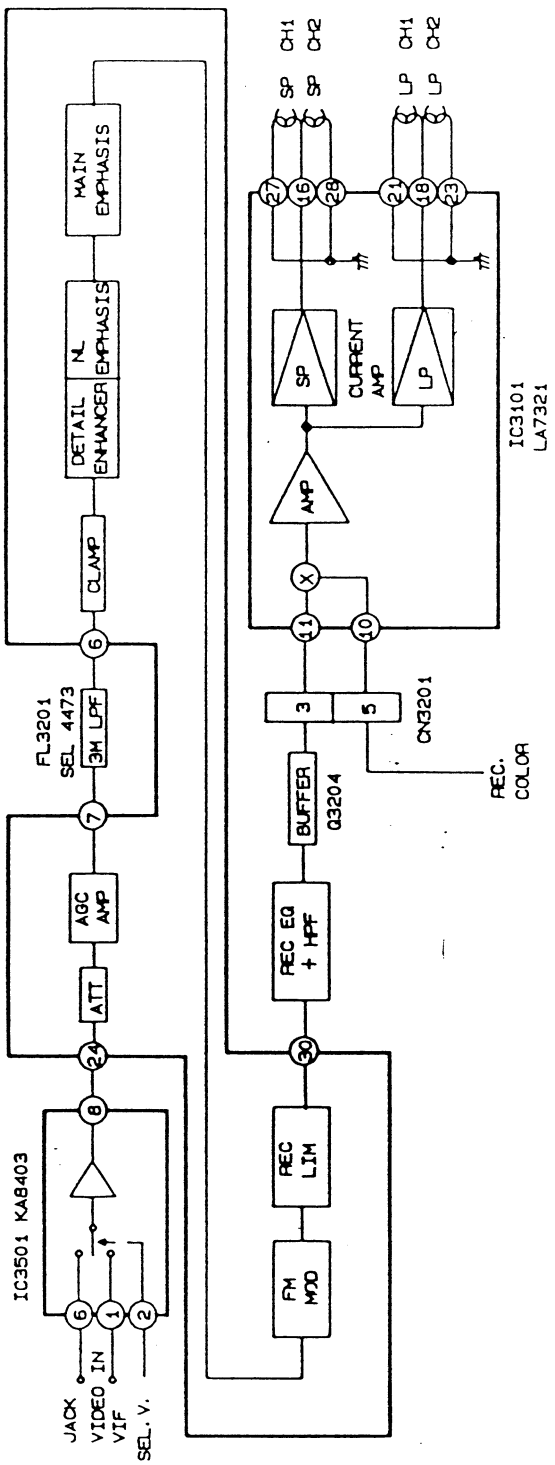
8-7. Audio Record Process



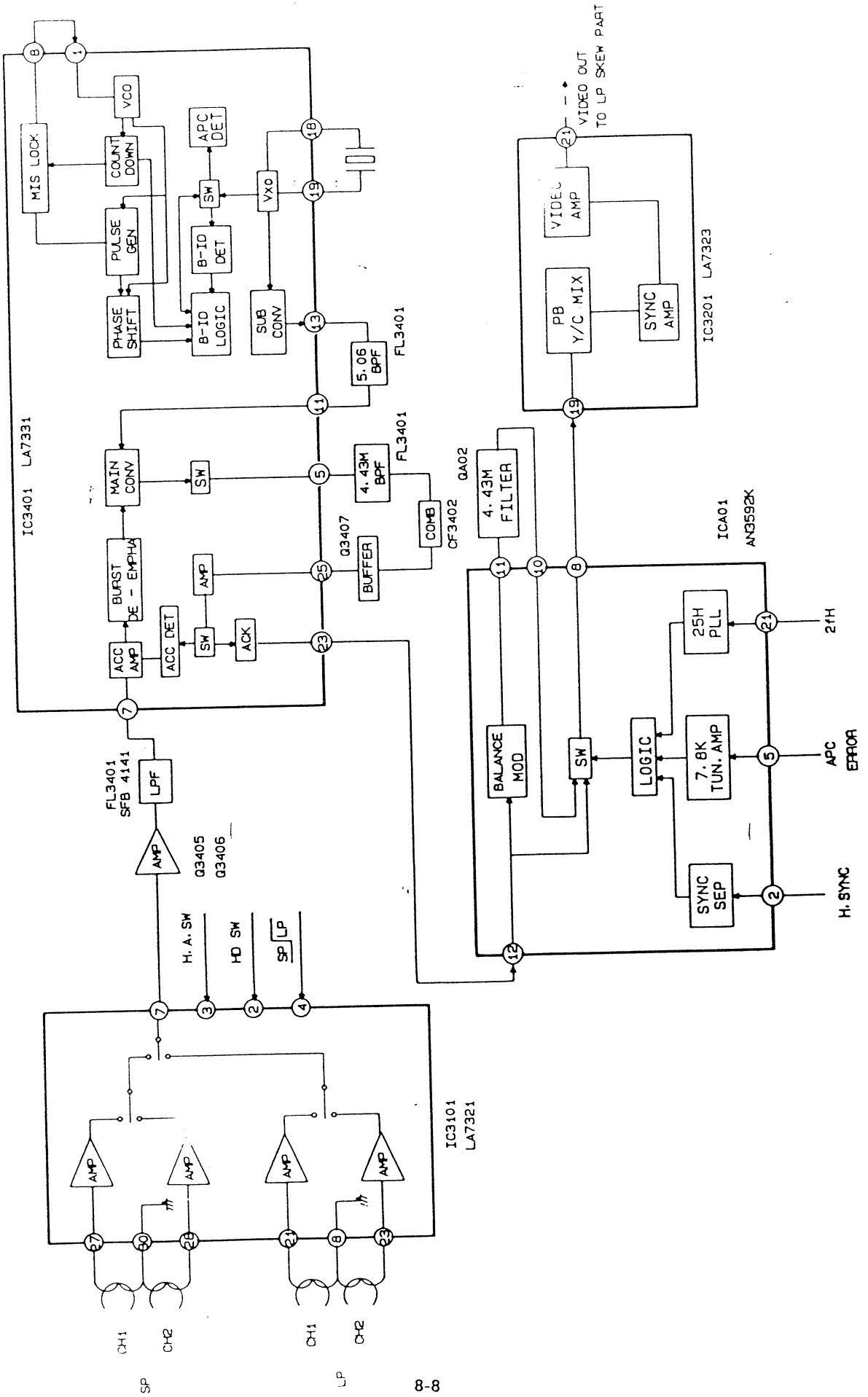
8-8. Luminance Playback Process



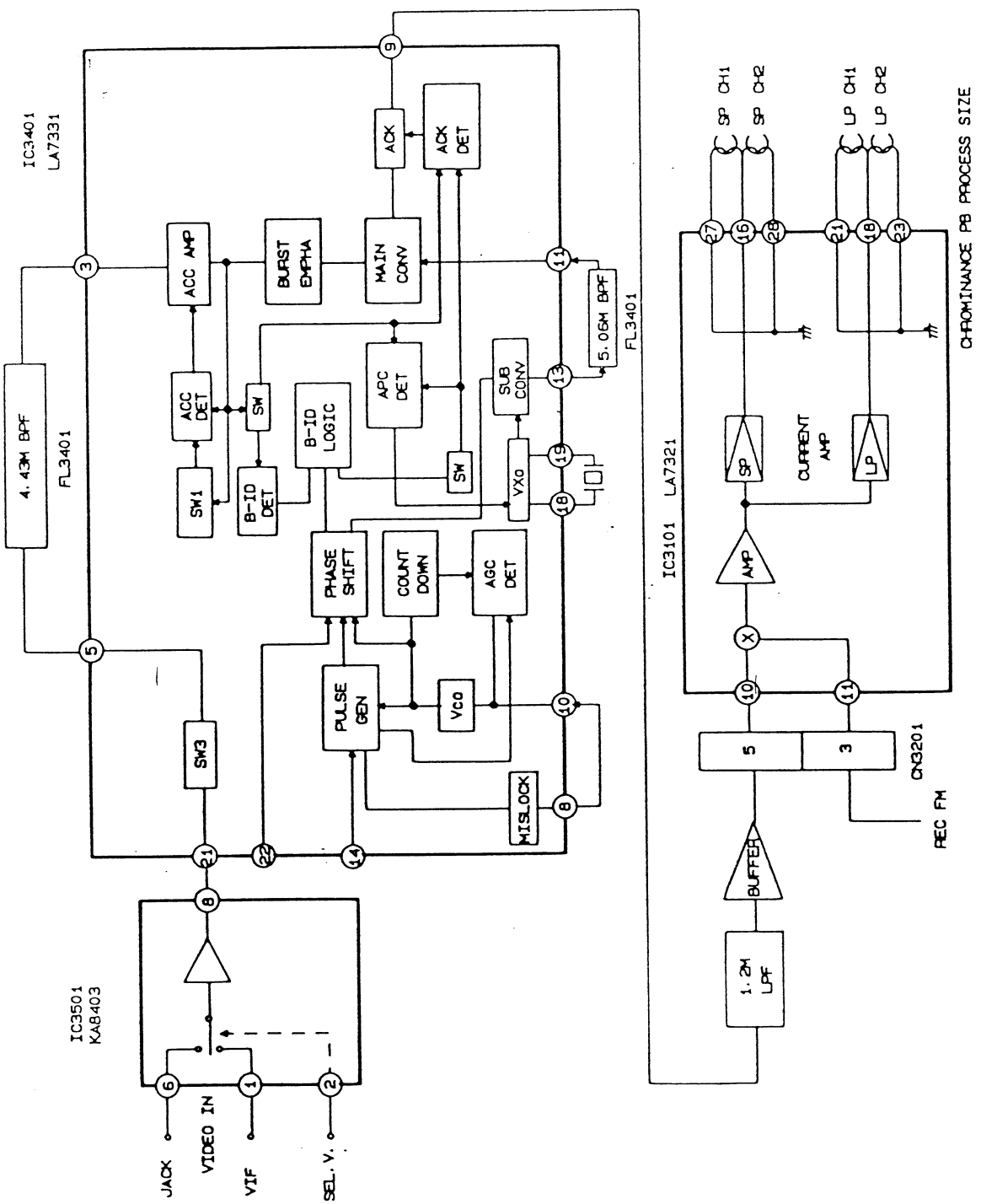
8-9. Luminance Record Process



8-10. Chrominance Playback Process



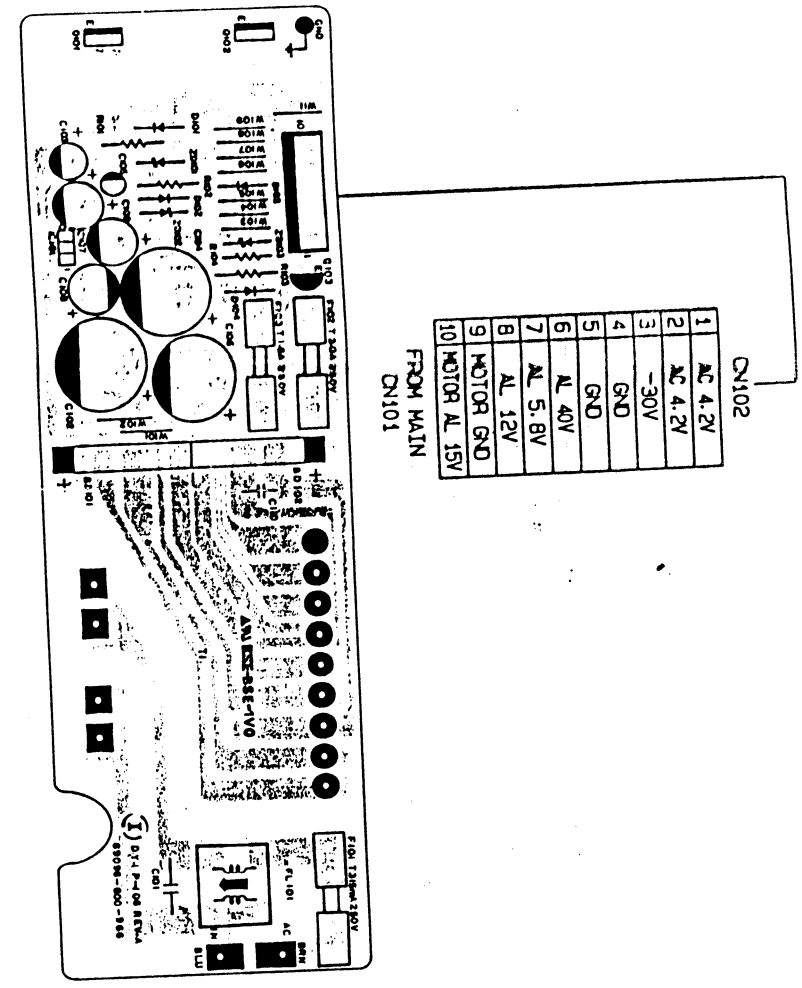
8-11. Chrominance Record Process



Page

9-11. Pre-Amp (Top Side) ---------- 9-13
Pre-Amp (Bottom Side) ---------- 9-14
9-12. VPS (OPTION) (Top Side) ---------- 9-13
VPS (OPTION) (Bottom Side) ------- 9-14
9-13. O S D (OPTION) (Top Side) --------- 9-15
O S D (OPTION) (Bottom Side) ------ 9-16
9-14. CAP. FG AMP (Top Side) ---------- 9-15
CAP. FG AMP (Bottom Side) -------- 9-16
9-15. LP SKEW (Top Side) ---------- 9-17
LP SKEW (Bottom Side) ---------- 9-18
9-16. Main (Top Side) ---------- 9-19
Main (Bottom Side) ---------- 9-20
9-17. Timer (VX/VI-1560) (Top Side) ------- 9-21
Timer (VX/VI-1560) (Bottom Side) --- 9-22
9-18. Timer (VX-1561) (Top Side) --------- 9-23
Timer (VX-1561) (Bottom Side) ------ 9-24
9-19. Function (VX/VI-1560) (Top Side) ---- 9-25
Function (VX/VI-1560) (Bottom Side) 9-26
9-20. Function (VX-1561) (Top Side) ------ 9-27
Function (VX-1561) (Bottom Side) --- 9-28
9-21. Speed SUB (OPTION) (Top Side) ---- 9-29
Speed SUB (OPTION) (Bottom Side) - 9-30

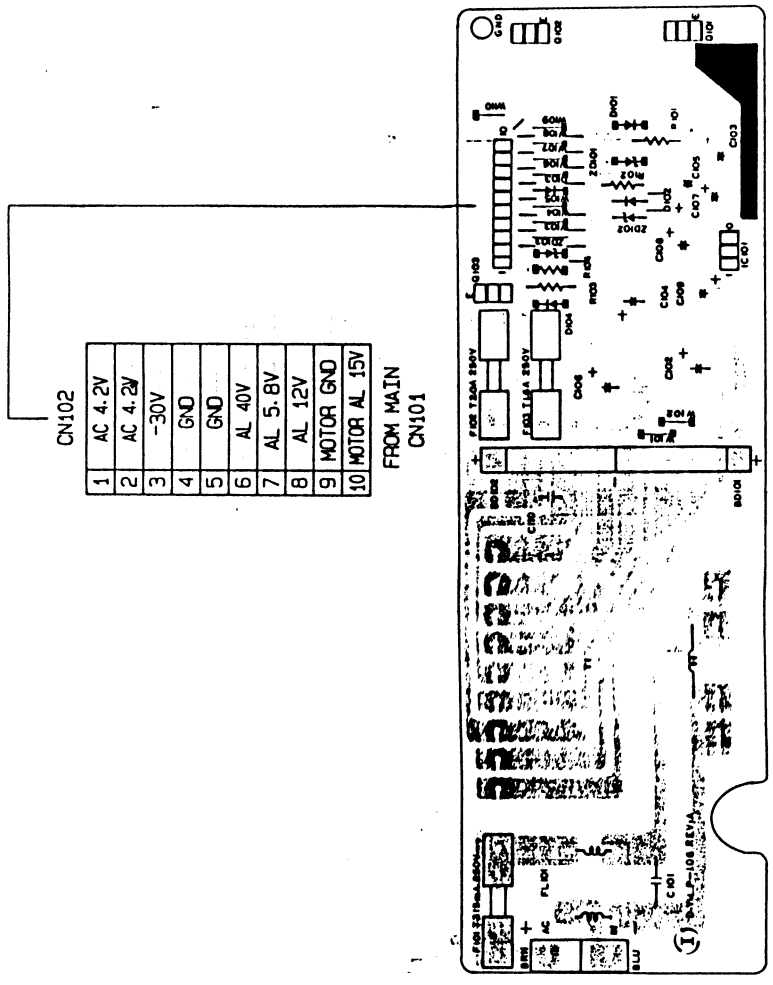
9-1. Regulator (Top Side)



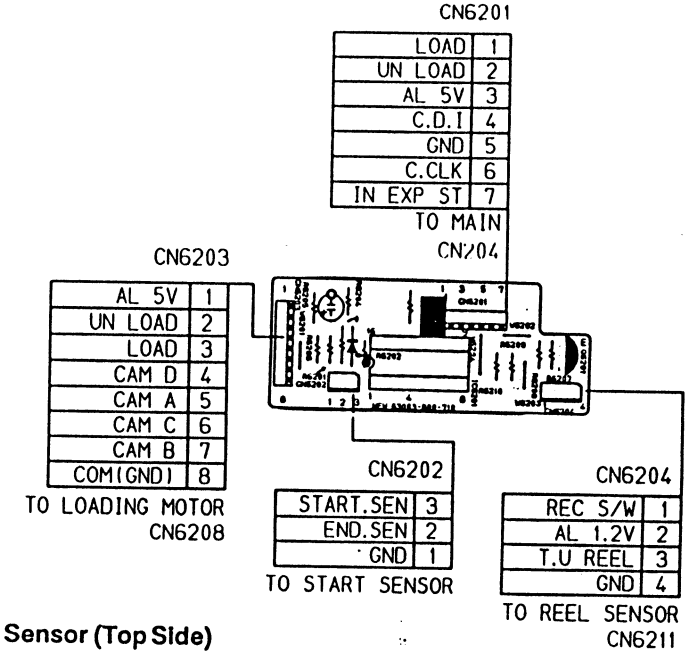
9. CIRCUIT BOARDS

		Page
9-1.	Regulator (Top Side)	9-3
	Regulator (Bottom Side)	9-4
9-2.	Deck Joint (Top Side)	9-5
	Deck Joint (Bottom Side)	9-6
9-3.	Reel Sensor (Top Side)	9-5
	Reel Sensor (Bottom Side)	9-6
9-4.	Loading Motor (Top Side)	9-7
	Loading Motor (Bottom Side)	9-8
9-5.	Cassette LED (Top Side)	9-7
	Cassette LED (Bottom Side)	9-8
9-6.	Start / End Sensor (Top Side)	9-9
	Start / End Sensor (Bottom Side)	9-10
9-7.	A/C Head (Top Side)	9-9
	A/C Head (Bottom Side)	9-10
9-8.	Remote Control (VX/VI-1560) (Top Side)	9-11
	Remote Control (VX/VI-1560) (Bottom Side)	9-12
9-9.	Remote Control (VX-1561) (Top Side)	9-11
	Remote Control (VX-1561) (Bottom Side)	9-12
9-10.	Sync DET (OPTION) (Top Side)	9-11
	Sync DET (OPTION) (Bottom Side)	9-12

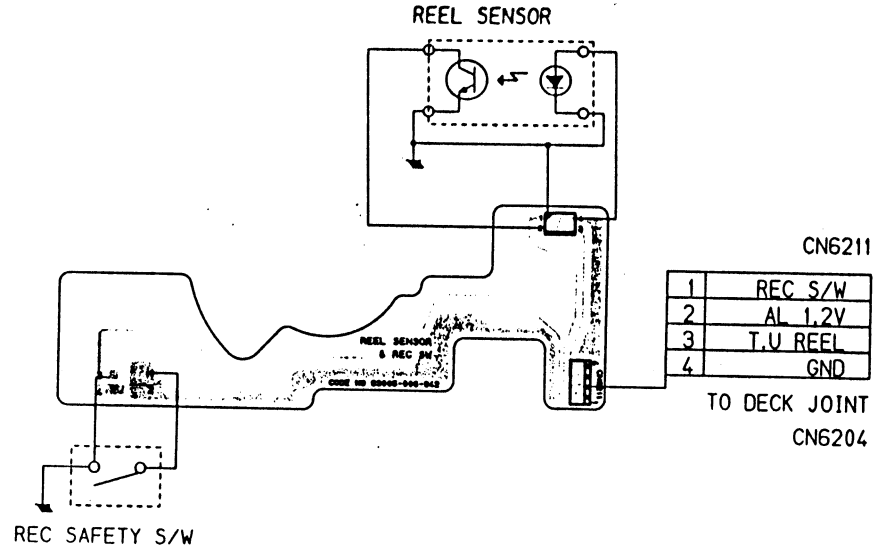
9-1. Regulator (Bottom Side)



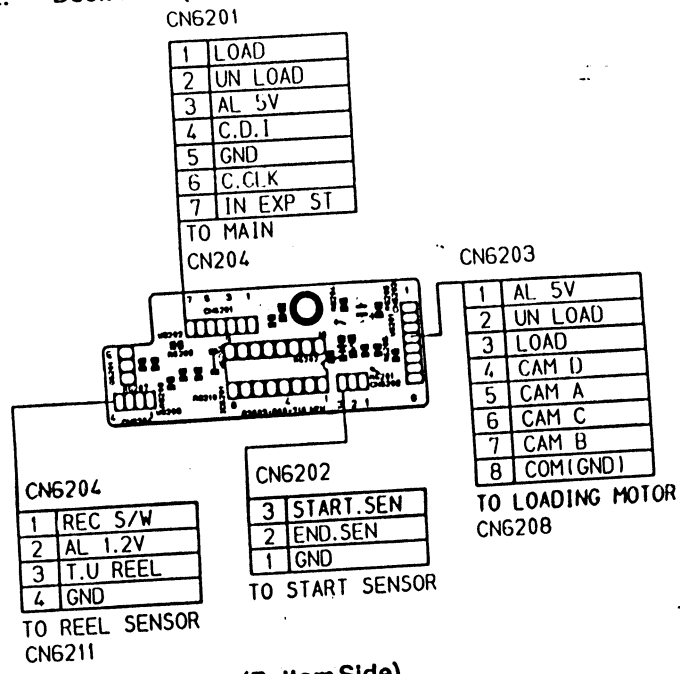
9-2. Deck Joint (Top Side)



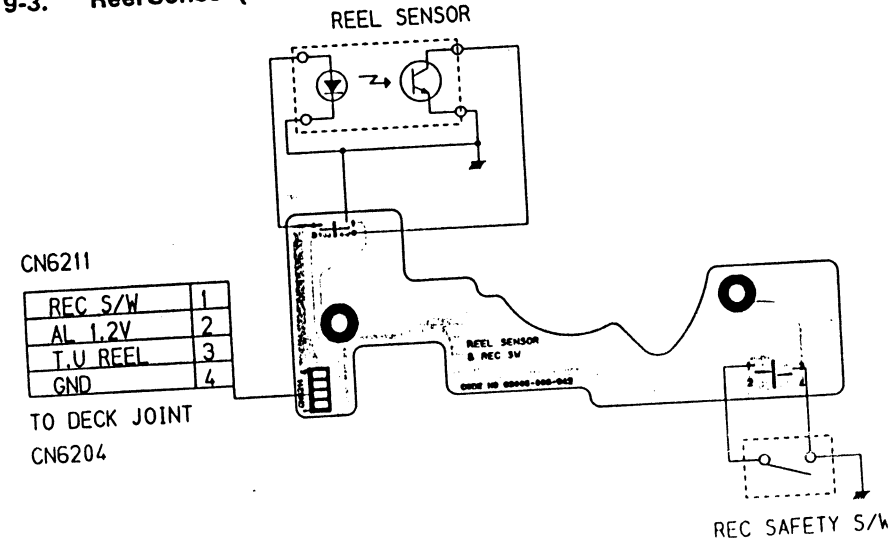
9-3. Reel Sensor (Top Side)



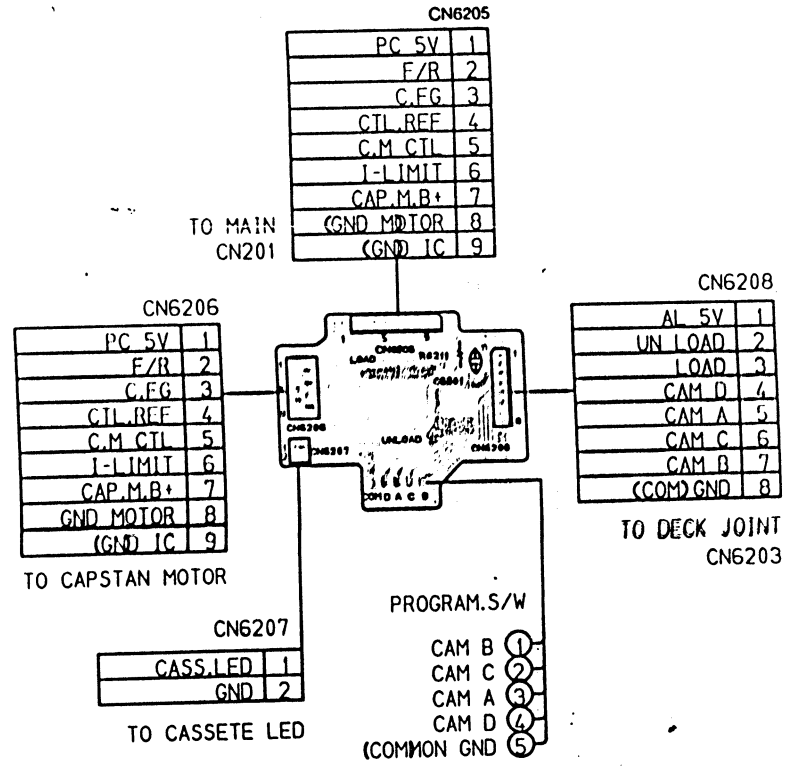
9-2. Deck Joint (Bottom Side)



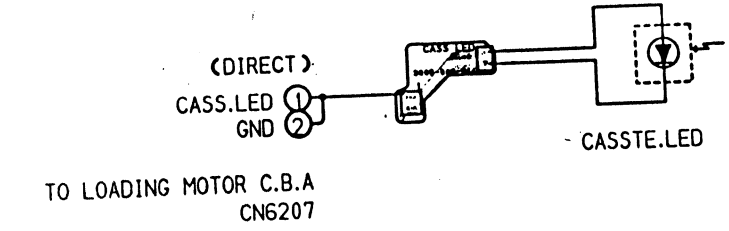
9-3. Reel Sensor (Bottom Side)



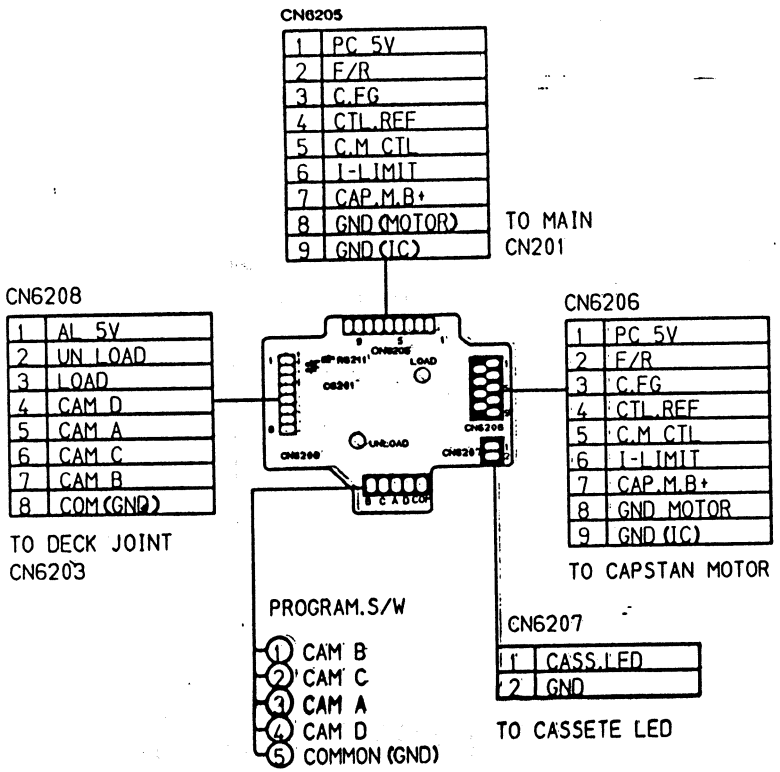
9-4. Loading Motor (Top Side)



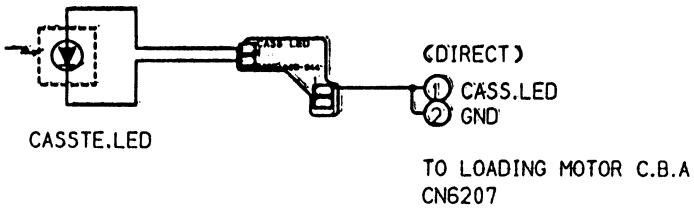
9-5. Cassette LED (Top Side)



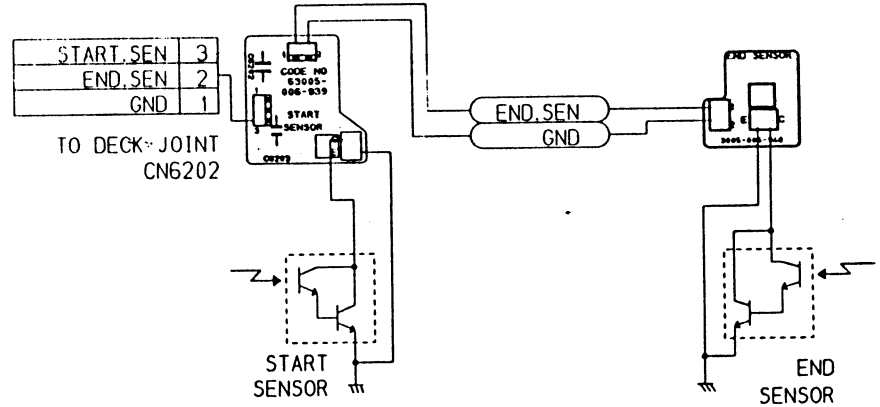
9-4. Loading Motor (Bottom Side)



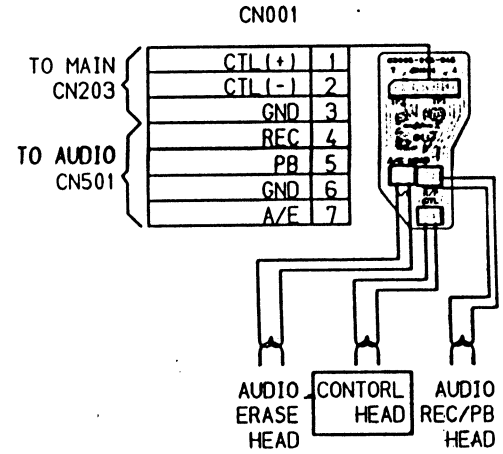
9-5. Cassette LED (Bottom Side)



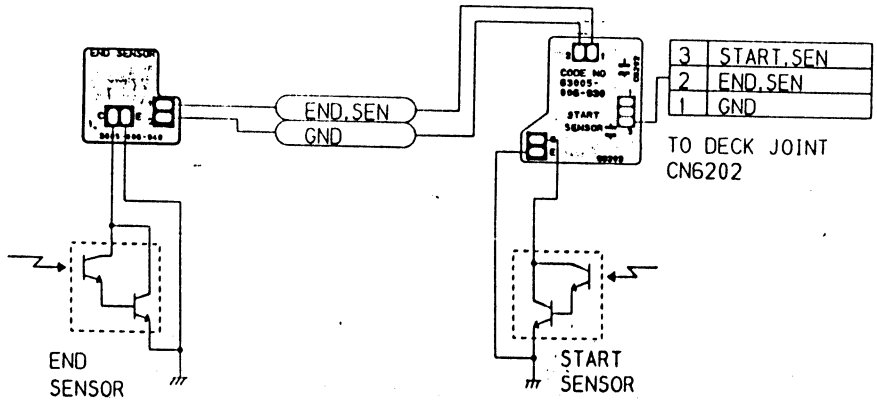
9-6. Start / End Sensor (Top Side)



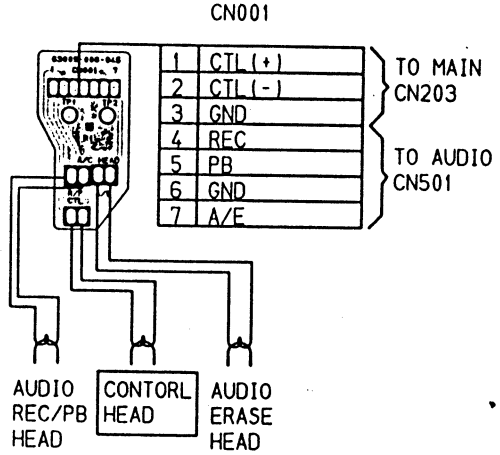
9-7. A/C Head (Top Side)



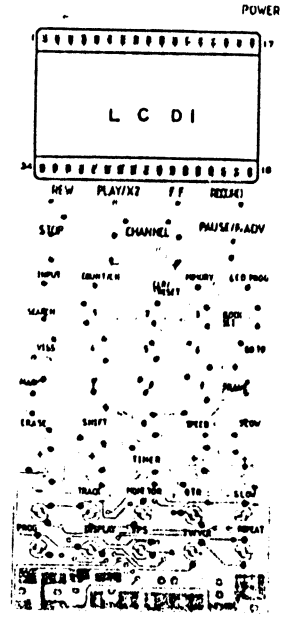
9-6. Start / End Sensor (Bottom Side)



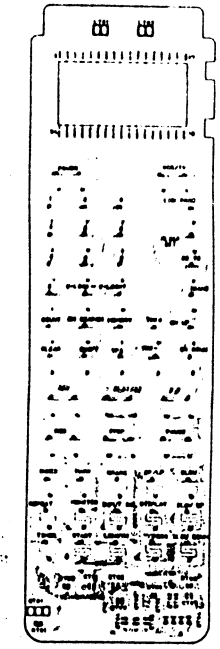
9-7. A/C Head (Bottom Side)



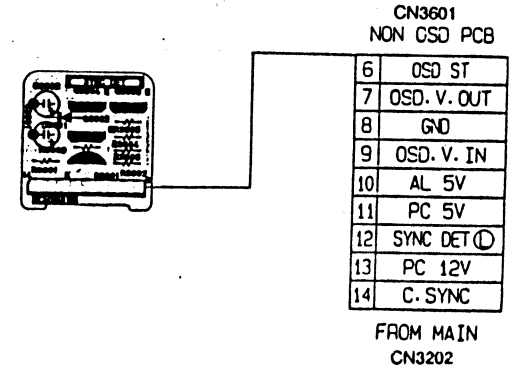
9-8. Remote Control (VX/VI-1560) (Top Side)



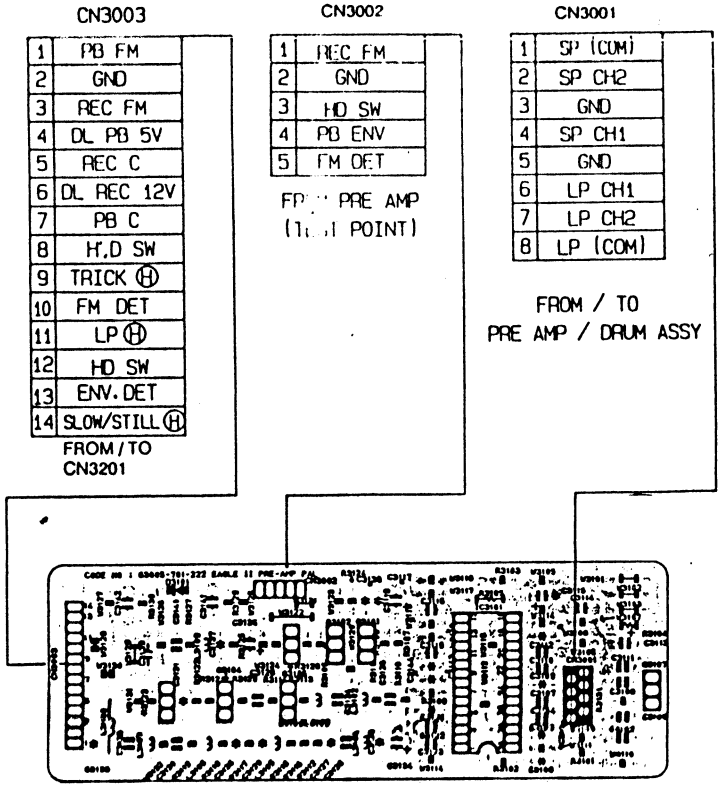
9-9. Remote Control (VX-1561) (Top Side)



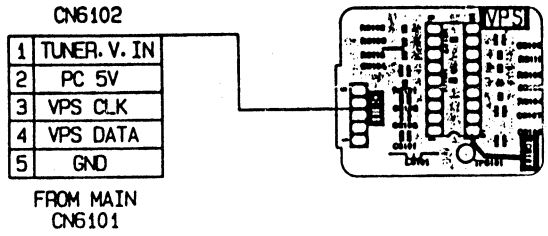
9-10. Sync DET (OPTION) (Top Side)



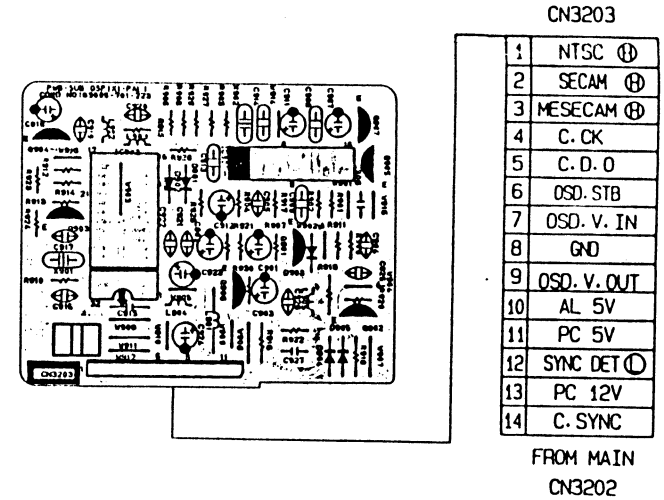
9-11. Pre-Amp (Bottom Side)



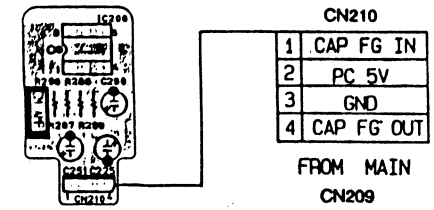
9-12. VPS (OPTION) (Bottom Side)



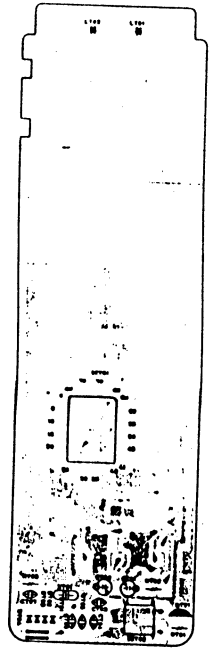
9-13. O S D (OPTION) (Top Side)



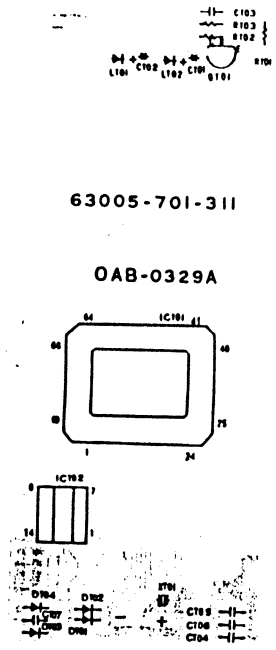
9-14. CAP. FG AMP (Top Side)



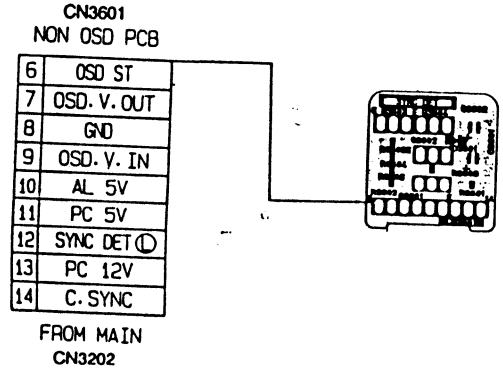
9-9. Remote Control (VX-1561) (Bottom Side)



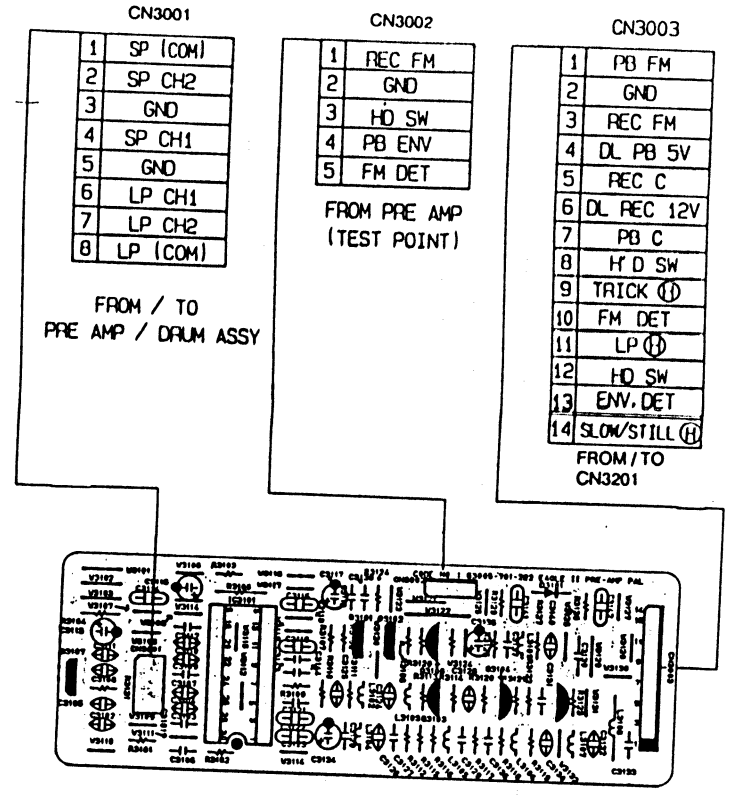
9-8. Remote Control (VX/VI-1560) (Bottom Side)



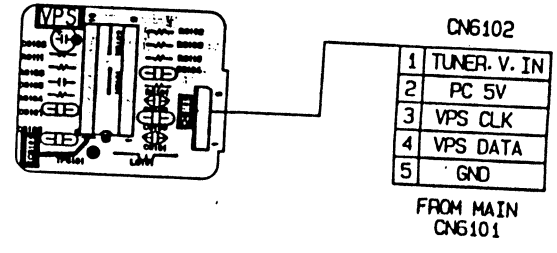
9-10. Sync DET (OPTION) (Bottom Side)



9-11. Pre-Amp (Top Side)



9-12. VPS (OPTION) (Top Side)

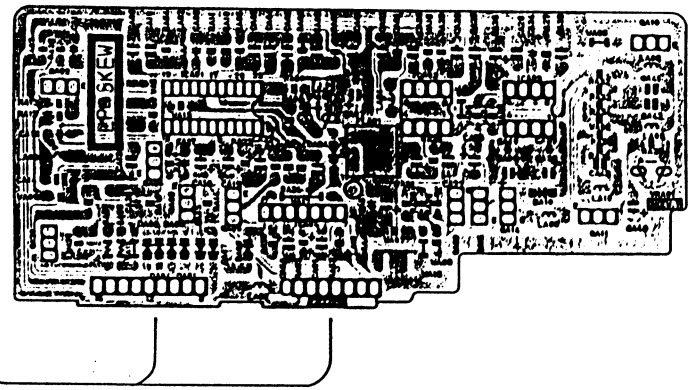


9-15. LP SKEW (Bottom Side)

CN3205

1	PC 12V
2	SKEW. V. OUT
3	GND
4	SKEW. V. IN
5	C. SYNC
6	PC 5V
7	DL PB 5V
8	LP Ⓗ
9	NTSC Ⓗ
10	MESECAM Ⓗ
11	SECAM Ⓗ
12	SKEW C. OUT
13	TRICK Ⓗ
14	SKEW C. IN
15	APC ERROR
16	FSC

FROM MAIN
CN3204



9-17. Timer (VX/VI-1560) (Top Side)

CN703

1	DMC 1
2	DMC 2
3	H' D SW
4	ENV. DET
5	CAP FG CD
6	CTL CD
7	OUT EXP ST
8	H. A. SW
9	S. CLK
10	S. D. O
11	GND
12	AC 4. 2V
13	BU 5V
14	STEP/SLOW
15	CM LIMIT
16	DUTY I/O
17	VPS DI
18	V. ENV
19	SYNC DET
20	VPS CK

FROM MAIN
CN206

CN702

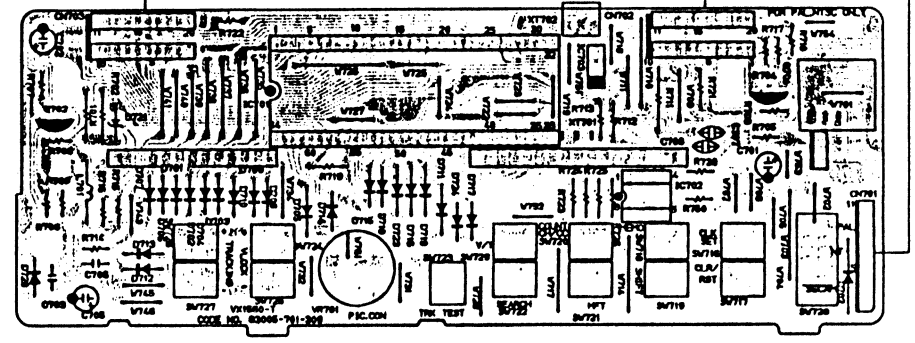
1	PC 5V
2	GND
3	AC 4. 2V
4	C. CLK
5	C. D. O
6	IN EXP ST
7	ROTARY SW
8	PLL ST
9	-30V
10	GND
11	AFT
12	C. D. I
13	OSD ST
14	GND
15	GND
16	AL 5V
17	NTSC Ⓗ
18	SECAM Ⓗ
19	PAL MES Ⓗ
20	PICTURE

FROM MAIN
CN205

CN701

1	S2	1
2	S7	2
3	S6	3
4	KEY 1	4
5	S5	5
6	KEY 2	6
7	S4	7
8	KEY 3	8
9	S9	9
10	S8	10

FROM FUNC
CN704

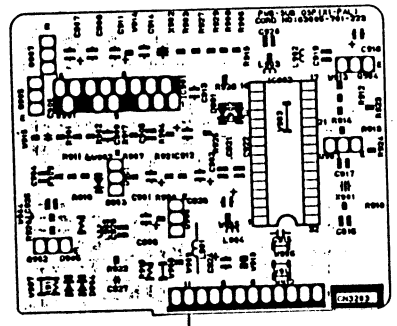


9-13. O S D (OPTION) (Bottom Side)

CN3203

1	NTSC Ⓗ
2	SECAM Ⓗ
3	MESECAM Ⓗ
4	C. CK
5	C. D. O
6	OSD. STB
7	OSD. V. IN
8	GND
9	OSD. V. OUT
10	AL 5V
11	PC 5V
12	SYNC DET Ⓛ
13	PC 12V
14	C. SYNC

FROM MAIN
CN3202

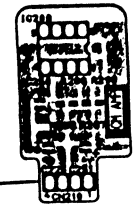


9-14. CAP. FG AMP (Bottom Side)

CN210

1	CAP FG IN
2	PC 5V
3	GND
4	CAP FG OUT

FROM MAIN
CN209

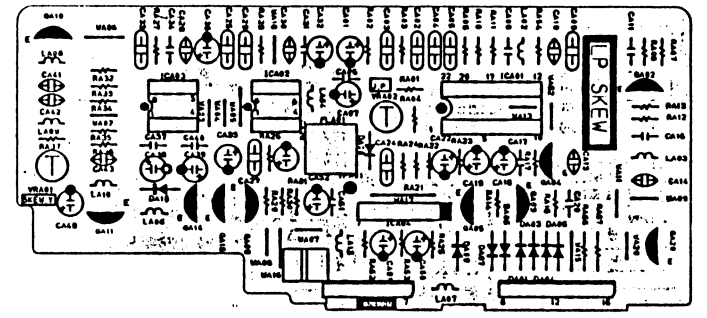


9-15. LP SKEW (Top Side)

CN3205

1	PC 12V
2	SKEW. V. OUT
3	GND
4	SKEW. V. IN
5	C. SYNC
6	PC 5V
7	DL PB 5V
8	LP Ⓗ
9	NTSC Ⓗ
10	MESECAM Ⓗ
11	SECAM Ⓗ
12	SKEW C. OUT
13	TRICK Ⓗ
14	SKEW C. IN
15	APC ERROR
16	FSC

FROM MAIN
CN3204



9-16. Main (Top Side)

(11)

CN501

6	R/P (P)
5	R/P (R)
4	GND
3	A/E
2	GND
1	F/E

FROM A.C & F.E HEAD

(13)

CN3204

1	PC 12V
2	SKEW. V. OUT
3	GND
4	SKEW. V. IN
5	C. SYNC
6	PC 5V
7	DL PB 5V
8	LP Ⓗ
9	NTSC Ⓗ
10	MESECAM Ⓗ
11	SECAM Ⓗ
12	SKEW C. OUT
13	TRICK Ⓗ
14	SKEW C. IN
15	APC ERROR
16	FSC

FROM LP SKEW CN3205

(12)

CN3202

1	NTSC Ⓗ
2	SECAM Ⓗ
3	MESECAM Ⓗ
4	C. CK
5	C. D. O
6	OSD. STB
7	OSD. V. IN
8	GND
9	OSD. V. OUT
10	AL 5V
11	PC 5V
12	SYNC DET Ⓛ
13	PC 12V
14	C. SYNC

FROM OSD CN3203

(8)

CN204

1	LOAD
2	UN LOAD
3	AL 5V
4	C. D. I
5	GND
6	C. CLK
7	IN EXP ST

FROM DECK. J CN6201

(9)

CN6101

1	TUNER. V. IN
2	PC 5V
3	VPS CLK
4	VPS DATA
5	GND

FROM V. P. S CN6102

CN3202 NON OSD PCB

6	OSD ST
7	OSD. V. OUT
8	GND
9	OSD. V. IN
10	AL 5V
11	PC 5V
12	SYNC DET Ⓛ
13	PC 12V
14	C. SYNC

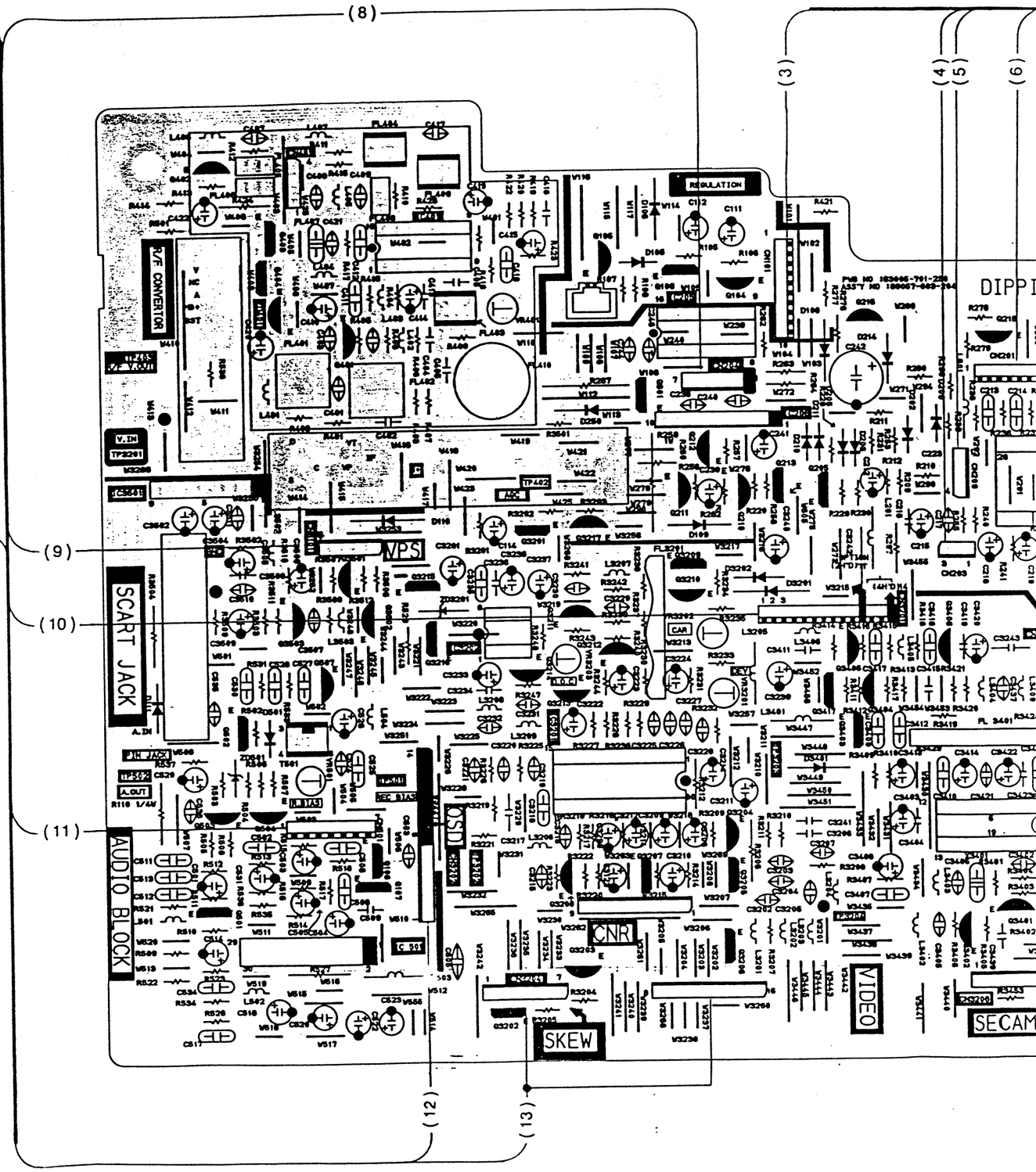
FROM SYNC. DET CN3601

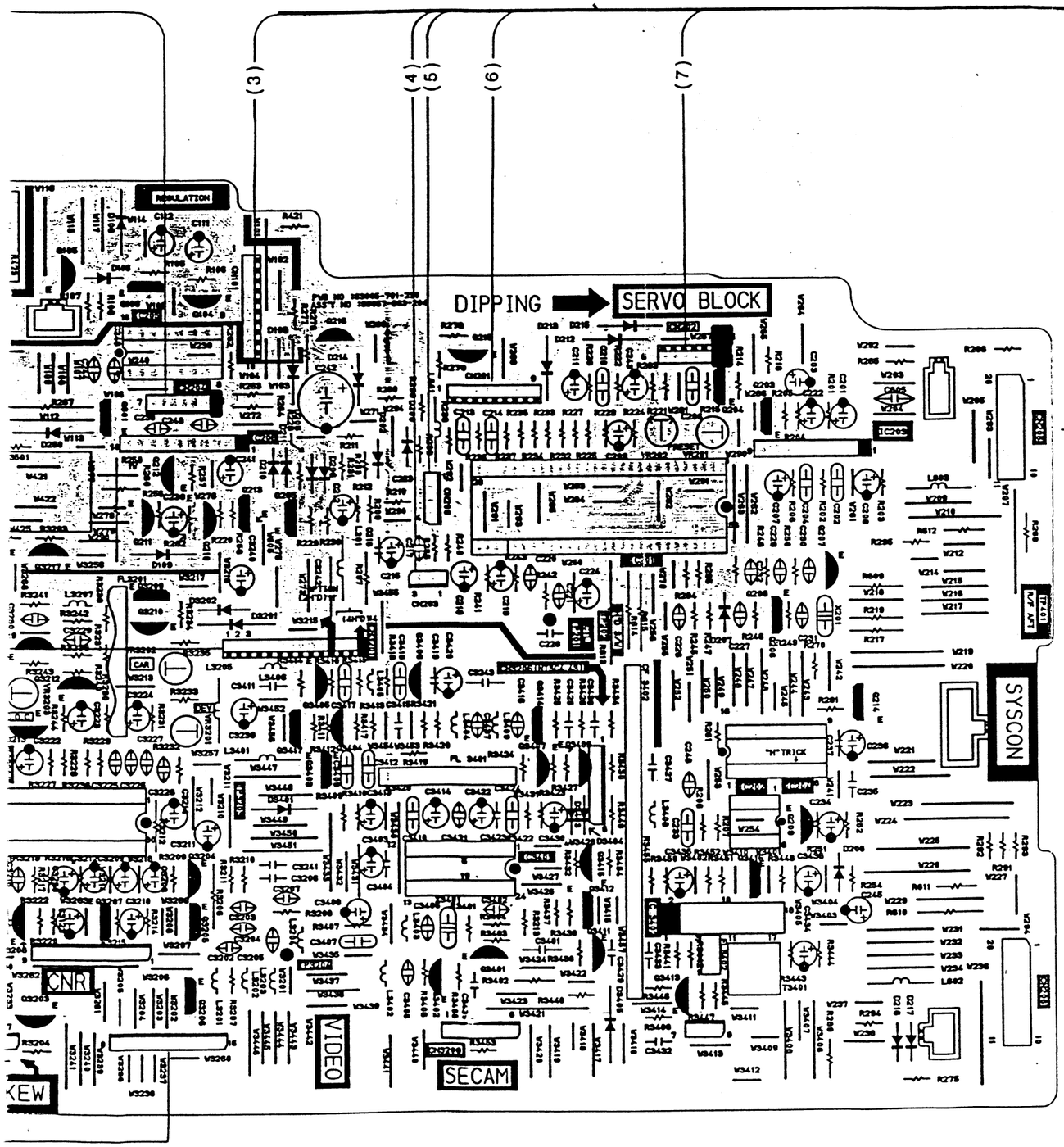
(10)

CN3201

1	PB FM
2	GND
3	REC FM
4	DL PB 5V
5	REC C
6	DL REC 12V
7	PB C
8	H' D SW
9	TRICK Ⓗ
10	FM DET
11	LP Ⓗ
12	H. A. SW
13	ENV. DET
14	SLOW/STILL Ⓗ

FROM PRE-AMP





(1)

CN205

1	PC 5V
2	GND
3	AC 4.2V
4	C.CLK
5	C.D.O
6	IN EXP ST
7	ROTARY SW
8	PLL ST
9	-30V
10	GND
11	AFT
12	C.D.I
13	OSD ST
14	GND
15	GND
16	AL 5V
17	NTSC Ⓗ
18	SECAM Ⓗ
19	PAL MES Ⓗ
20	PICTURE

FROM TIMER
CN702

(2)

CN206

1	DMC 1
2	DMC 2
3	H'D SW
4	ENV.DET
5	CAP FG CD
6	CTL CD
7	OUT EXP ST
8	H.A.SW
9	S.CLK
10	S.D.O
11	GND
12	AC 4.2V
13	BU 5V
14	STEP/SLOW
15	CM LIMIT
16	DUTY I/O
17	VPS DI
18	V.ENV
19	SYNC DET
20	VPS CK

FROM TIMER
CN703

(3)

CN101

1	-20V AC 4.2V
2	-20V AC 4.2V
3	-30V
4	GND
5	GND
6	PRST VTG 33V
7	AL 5.8V
8	AL 12V
9	MOTOR GND
10	MOTOR AL 15V

FROM
REG ASSY
CN102

(6)

CN201

1	PC 5V
2	R/F
3	C.FG
4	CTL REF
5	CM CTL
6	I.LIMIT
7	C.MOTOR B^+
8	MOTOR GND
9	IC.GND

FROM DECK.J
CN6205

(4)

CN203

1	GND
2	CTL (+)
3	CTL (-)

FROM A.C
CN001

(7)

CN202

1	D.PG
2	GND
3	D.FG
4	D.MOTOR B^+
5	DM CTL
6	MOTOR GND

FROM
DRUM MOTOR (CN1)

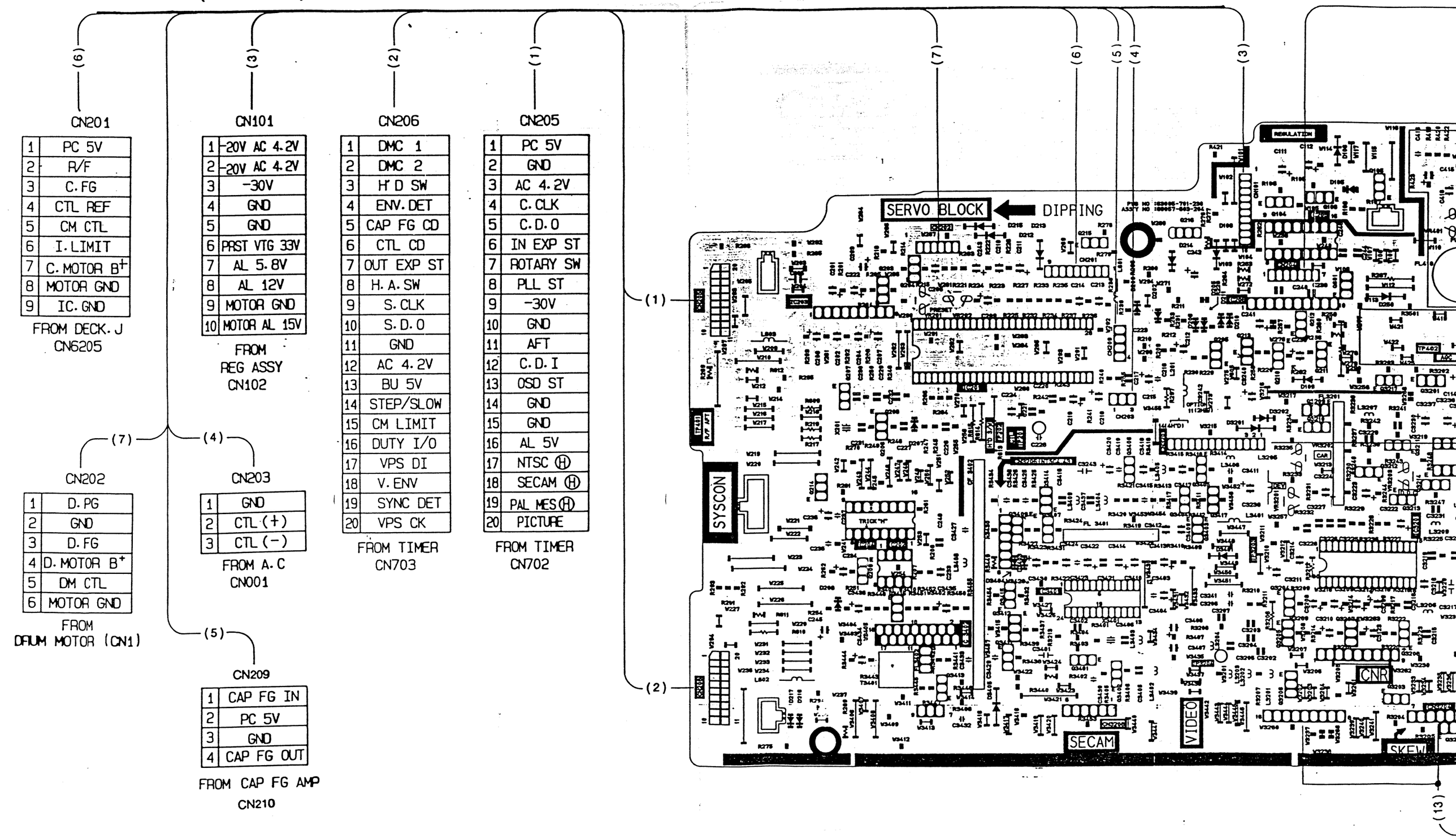
(5)

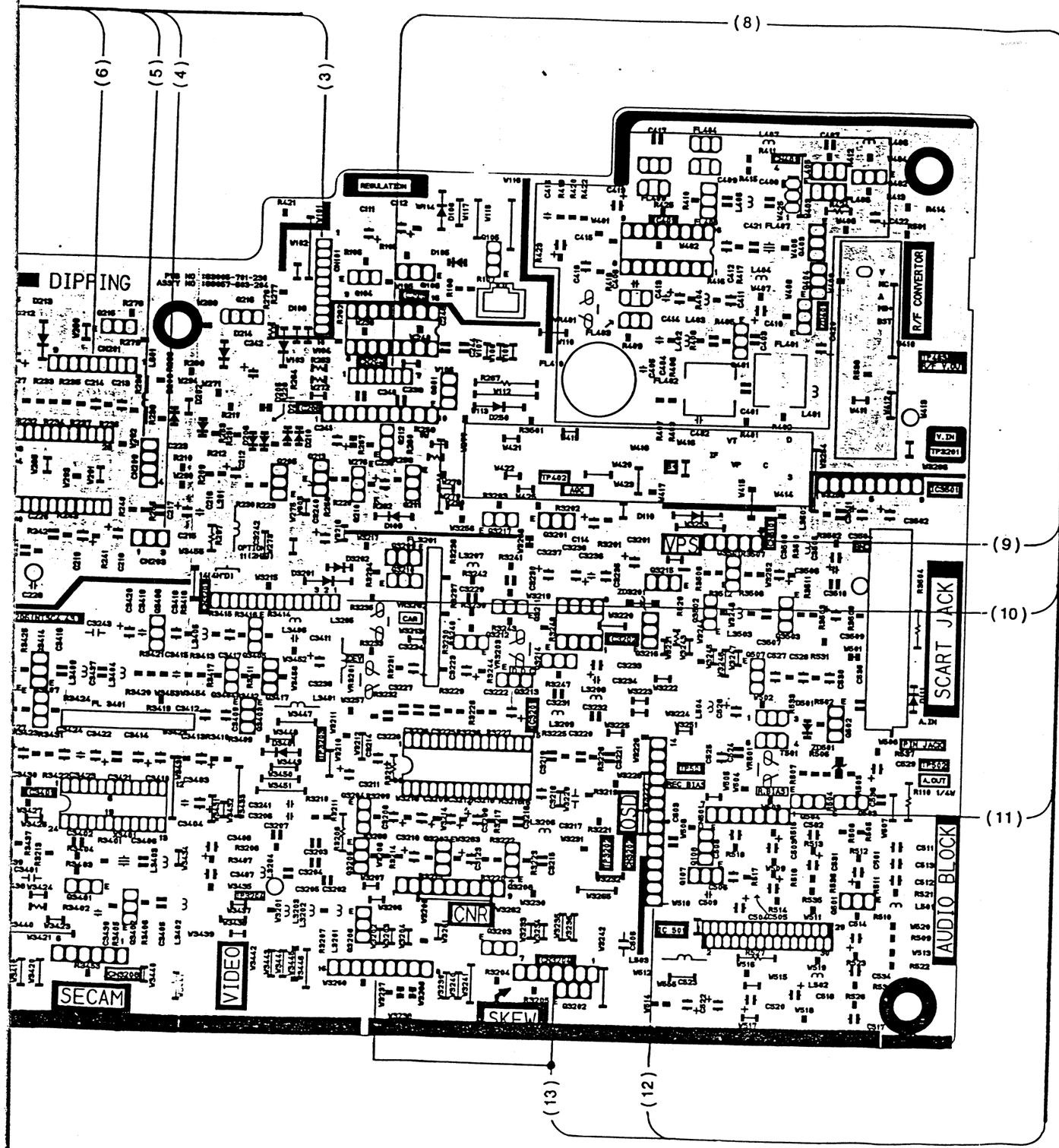
CN209

1	CAP FG IN
2	PC 5V
3	GND
4	CAP FG OUT

FROM CAP FG AMP
CN210

9-16. Main (Bottom Side)





(8)

CN204

1	LOAD
2	UN LOAD
3	AL 5V
4	C.D.I
5	GND
6	C.CLK
7	IN EXP ST

FROM DECK.J
CN6201

CN3201

1	PB FM
2	GND
3	REC FM
4	DL PB 5V
5	REC C
6	DL REC 12V
7	PB C
8	H'D SW
9	TRICK Ⓗ
10	FM DET
11	LP Ⓗ
12	H.A.SW
13	ENV.DET
14	SLOW/STILL Ⓗ

FROM PRE-AMP

(12)

CN3202

1	NTSC Ⓗ
2	SECAM Ⓗ
3	MESECAM Ⓗ
4	C.CK
5	C.D.O
6	OSD.STB
7	OSD.V.IN
8	GND
9	OSD.V.OUT
10	AL 5V
11	PC 5V
12	SYNC DET Ⓛ
13	PC 12V
14	C.SYNC

FROM OSD
CN3203

CN3202
NON OSD PCB

6	OSD ST
7	OSD.V.OUT
8	GND
9	OSD.V.IN
10	AL 5V
11	PC 5V
12	SYNC DET Ⓛ
13	PC 12V
14	C.SYNC

FROM SYNC DET
CN3601

(13)

CN3204

1	PC 12V
2	SKEW.V.OUT
3	GND
4	SKEW.V.IN
5	C.SYNC
6	PC 5V
7	DL PB 5V
8	LP Ⓗ
9	NTSC Ⓗ
10	MESECAM Ⓗ
11	SECAM Ⓗ
12	SKEW C.OUT
13	TRICK Ⓗ
14	SKEW C.IN
15	APC ERROR
16	FSC

FROM LP SKEW
CN3205

(11)

CN501

6	R/P (P)
5	R/P (R)
4	GND
3	A/E
2	GND
1	F/E

FROM A.C & F.E
HEAD

(9)

CN6101

1	TUNER.V.IN
2	PC 5V
3	VPS CLK
4	VPS DATA
5	GND

FROM V.P.S
CN6102

9-17. Timer (VX/VI-1560) (Bottom Side)

CN701

1	S2	1
2	S7	2
3	S6	3
4	KEY1	4
5	S5	5
6	KEY2	6
7	S4	7
8	KEY3	8
9	S9	9
10	S8	10

FROM FUNC
CN704

CN702

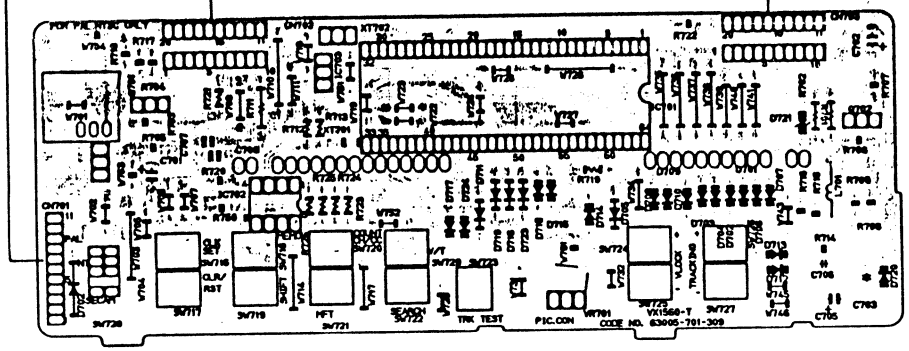
1	PC 5V
2	GND
3	AC 4.2V
4	C.CLK
5	C.D.O
6	IN EXP ST
7	ROTARY SW
8	PLL ST
9	-30V
10	GND
11	AFT
12	C.D.I
13	OSD ST
14	GND
15	GND
16	AL 5V
17	NTSC Ⓗ
18	SECAM Ⓗ
19	PAL MES Ⓗ
20	PICTURE

FROM MAIN
CN205

CN703

1	DMC 1
2	DMC 2
3	H'D SW
4	ENV.DET
5	CAP FG CD
6	CTL CD
7	OUT EXP ST
8	H.A.SW
9	S.CLK
10	S.D.O
11	GND
12	AC 4.2V
13	BU 5V
14	STEP/SLOW
15	CM LIMIT
16	DUTY I/O
17	-VPS DI
18	V.ENV
19	SYNC DET
20	VPS CK

FROM MAIN
CN206



9-18. Timer (VX-1561) (Top Side)

CN701

1	NC
2	KEY IN 1
3	KEY IN 2
4	KEY IN 3
5	J (S7)
6	I (S8)
7	H (S9)
8	D (S4)
9	C (S2)
10	NC
11	NC

FROM FUNC
CN704

CN702

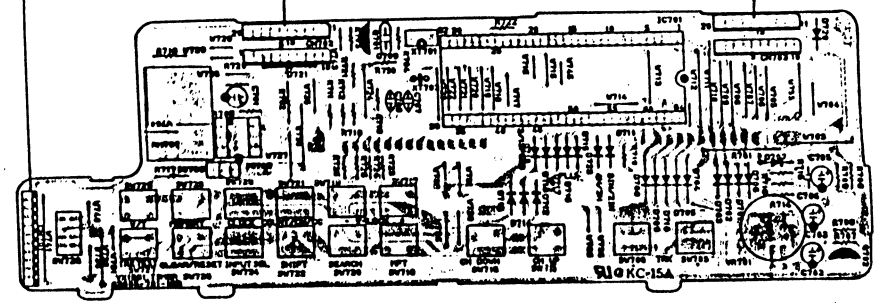
1	PC 5V
2	GND
3	AC 4.2V
4	C.CLK
5	C.D.O
6	IN EXP ST
7	ROTARY SW
8	PLL ST
9	-30V
10	GND
11	AFT
12	C.D.I
13	OSD ST
14	GND
15	GND
16	AL 5V
17	NTSC Ⓗ
18	SECAM Ⓗ
19	PAL MES H
20	PICTURE

FROM MAIN
CN205

CN703

1	DMC 1
2	DMC 2
3	H'D SW
4	ENV.DET
5	CAP FG CD
6	CTL CD
7	OUT EXP ST
8	H.A.SW
9	S.CLK
10	S.D.O
11	GND
12	AC 4.2V
13	BU 5V
14	STEP/SLOW
15	CM LIMIT
16	DUTY I/O
17	VPS DI
18	V.ENV
19	SYNC DET
20	VPS CK

FROM MAIN
CN206



9-18. Timer (VX-1561) (Bottom Side)

CN703

1	DMC 1
2	DMC 2
3	H.D SW
4	ENV. DET
5	CAP FG CD
6	CTL CD -
7	OUT EXP ST
8	H.A.SW
9	S.CLK
10	S.D.O
11	GND
12	AC 4.2V
13	BU 5V
14	STEP/SLOW
15	CM LIMIT
16	DUTY I/O
17	VPS DI
18	V.ENV
19	SYNC DET
20	VPS CK

FROM MAIN
CN206

CN702

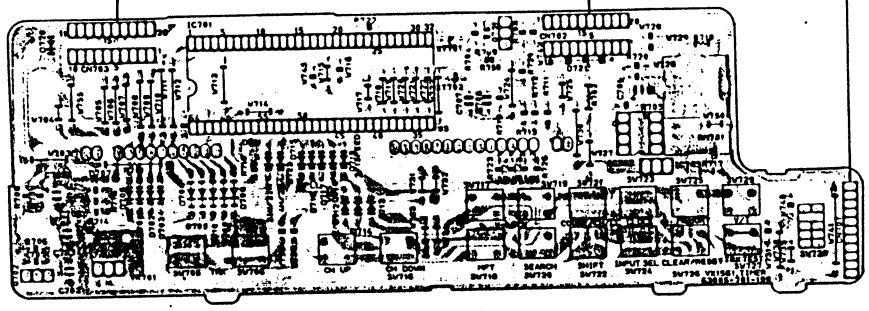
1	PC 5V
2	GND
3	AC 4.2V
4	C.CLK
5	C.D.O
6	IN EXP ST
7	ROTARY SW
8	PLL ST
9	-30V
10	GND
11	AFT
12	C.D.I
13	OSD ST
14	GND
15	GND
16	AL 5V
17	NTSC Ⓗ
18	SECAM Ⓗ
19	PAL MES H
20	PICTURE

FROM MAIN
CN205

CN701

1	NC
2	KEY IN 1
3	KEY IN 2
4	KEY IN 3
5	J (S7)
6	I (S8)
7	H (S9)
8	D (S4)
9	C (S2)
10	NC
11	NC

FROM FUNC
CN704

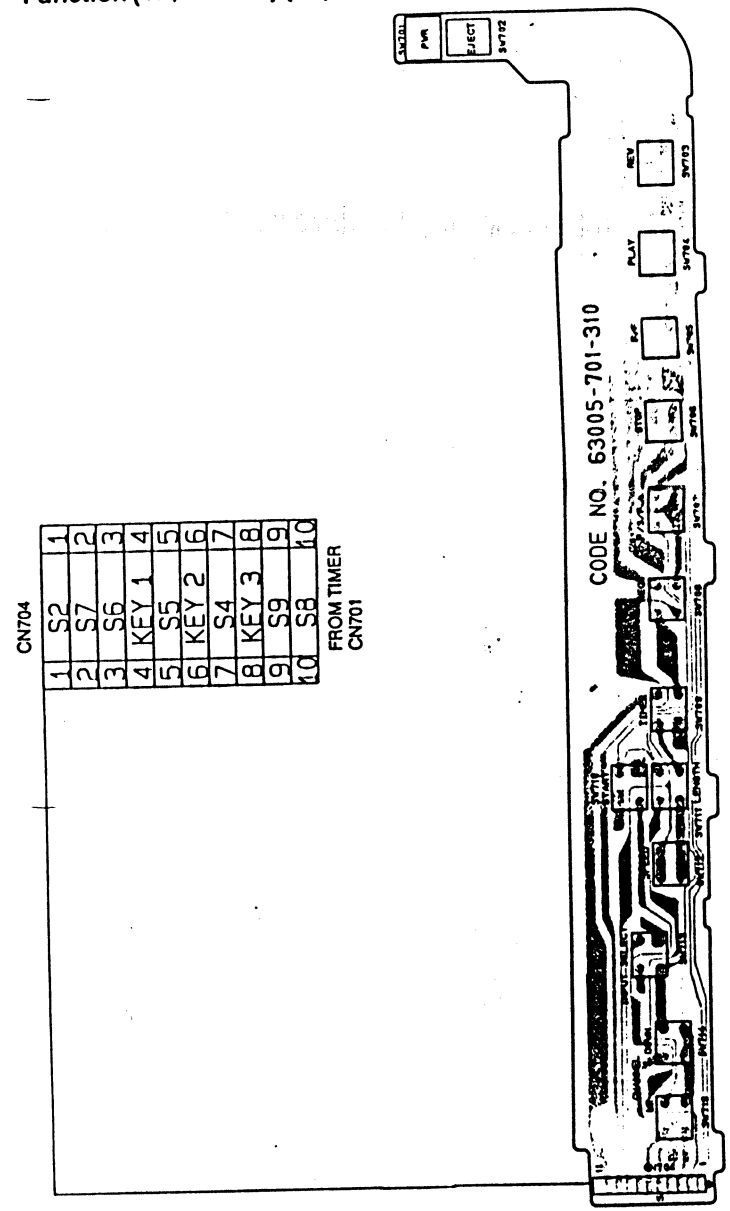


9-19. Function (VX/VI-1560) (Top Side)

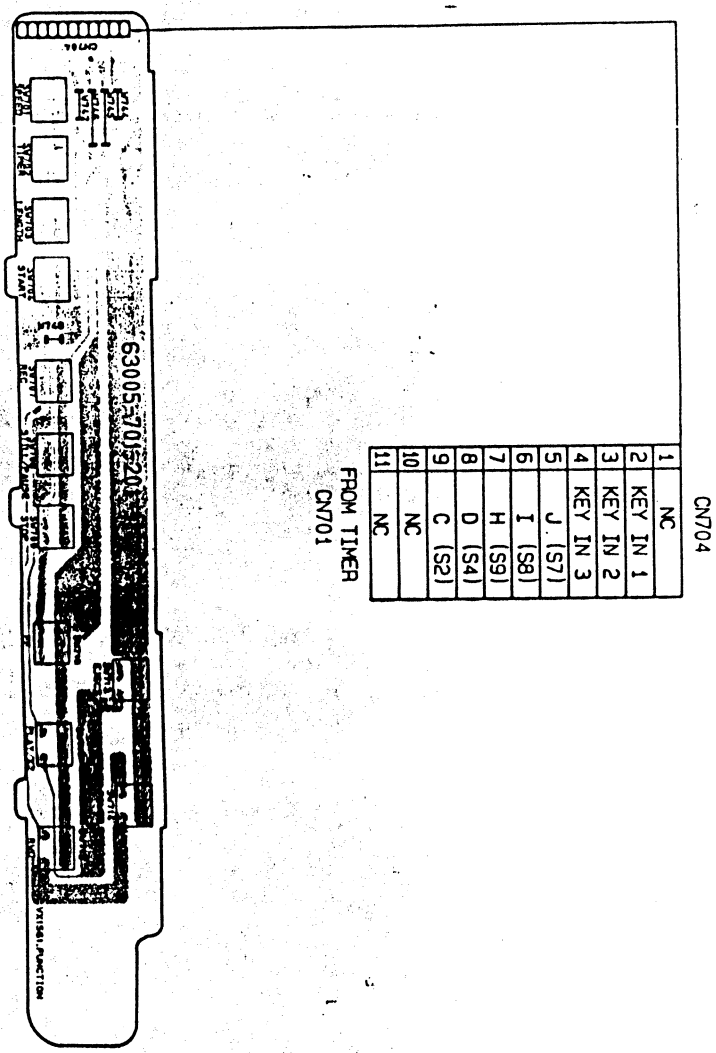
CN704

1	S2
2	S7
3	S6
4	KEY 1
5	S5
6	KEY 2
7	S4
8	KEY 3
9	S9
10	S8

FROM TIMER
CN701



9-20. Function (VX-1561) (Bottom Side)

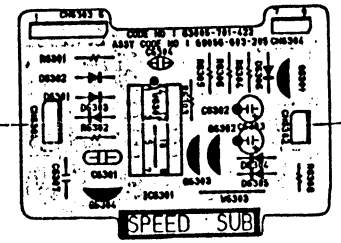


CN704

1	NC
2	KEY IN 1
3	KEY IN 2
4	KEY IN 3
5	J (S7)
6	I (S8)
7	H (S9)
8	D (S4)
9	C (S2)
10	NC
11	NC

FROM TIMER
CN701

9-21. Speed SUB (OPTION) (Top Side)



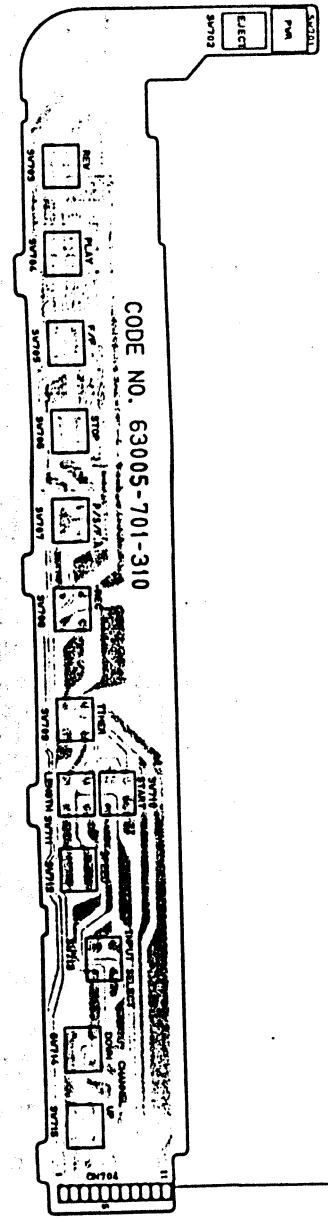
CN6301
TO F/T

1	G13
2	SEG A
3	$\overline{\text{RST}}$
4	R. IC OUT

CN6302
TO MAIN

AL 5V	1
H. A. SW	2
D. REC	3

9-19. Function (VX/VI-1560) (Bottom Side)

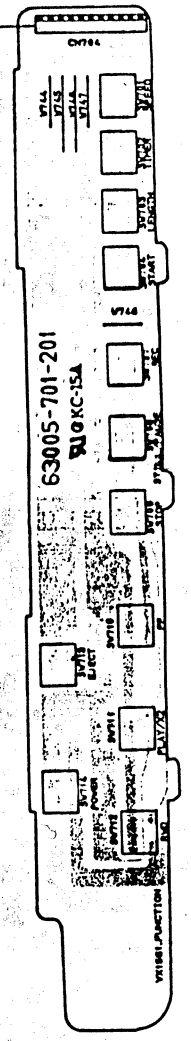


CN704

1	S2
2	S7
3	S6
4	KEY1
5	S5
6	KEY2
7	S4
8	KEY3
9	S9
10	S8

FROM TIMER
CN701

9-20. Function (VX-1561) (Top Side)



CN704

1	NC
2	KEY IN 1
3	KEY IN 2
4	KEY IN 3
5	J (S7)
6	I (S8)
7	H (S9)
8	D (S4)
9	C (S2)
10	NC
11	NC

FROM TIMER
CN701

REGULATOR

10-1. Regulator

SPECIAL NOTE
All integrated circuits and many other semiconductor devices are electrostatically sensitive and therefore require the special handling techniques described under the "electrostatically sensitive (ES) devices" section of this service manual.

NOTE
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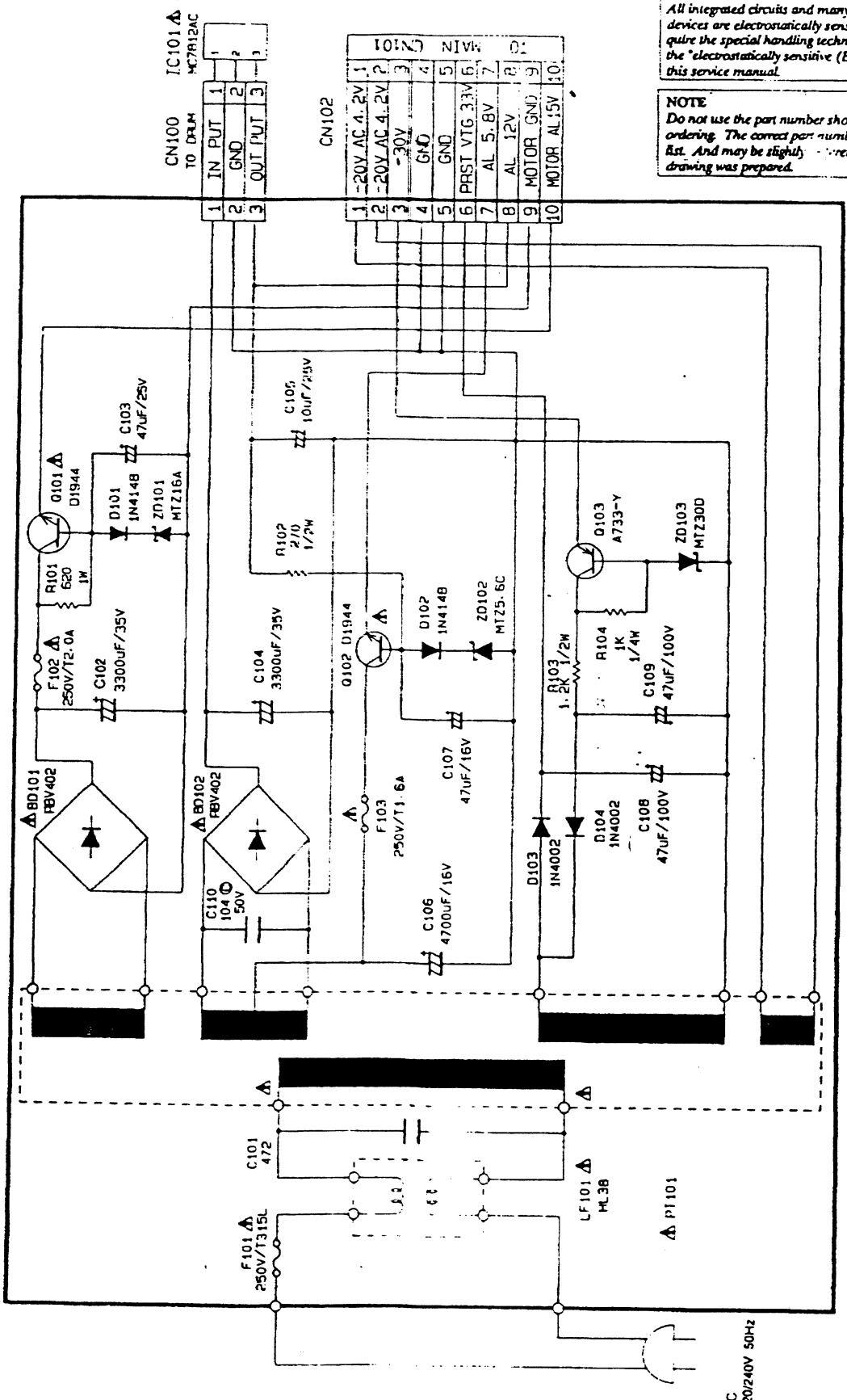
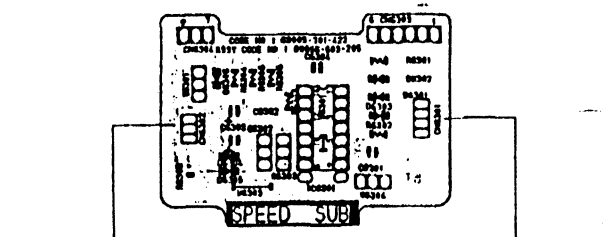


IMPORTANT SAFETY NOTICES
Components identified with the mark ⚠ have the special characteristics for safety when replacing any of these components. Use only the same type.

	Q101			Q102			Q103		
	E	C	B	E	C	B	E	C	B
STOP	15.4	18.5	16.04	5.9	8.8	6.5	-30.1	-30.1	-30.1
PB	15.3	18.1	16.0	5.9	8.6	6.5	-30.1	-30.1	-30.1
REC	15.3	17.5	15.9	5.9	8.6	6.5	-30.1	-30.2	-30.1

9-21. Speed SUB (OPTION) (Bottom Side)



CN6302
TO MAIN

AL 5V	1
H. A. SW	2
D. REC	3

CN6301
TO F/T

1	G13
2	SEG A
3	$\overline{RST}$
4	R. IC OUT

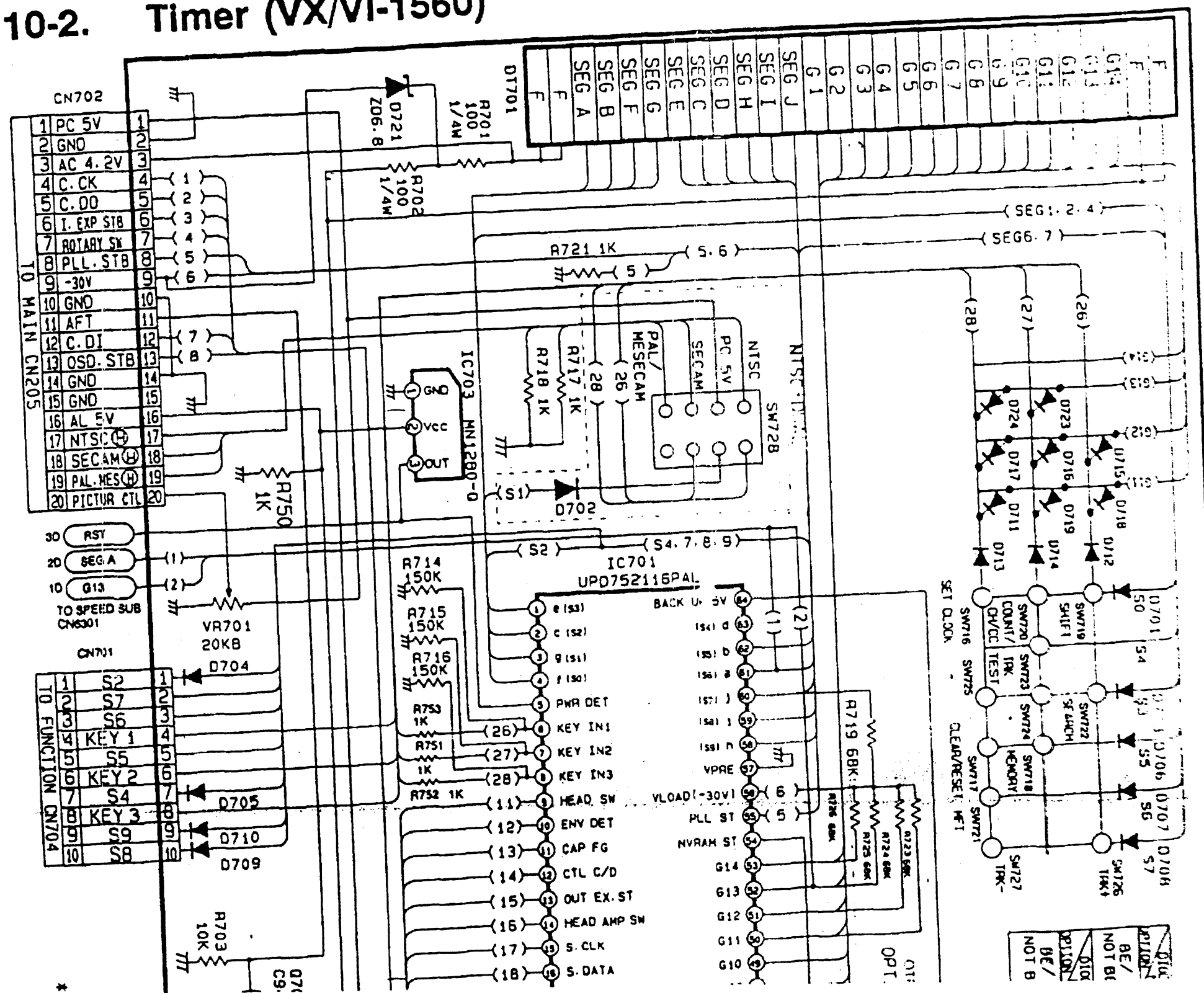
10. SCHEMATIC DIAGRAMS

Page

10-1. Regulator ---------- 10-2
10-2. Timer (VX/VI-1560) ---------- 10-3
10-3. Timer (VX-1561) ---------- 10-3
10-4. Servo / Power / System Control ----- 10-4
10-5. Luminance/Chrominance ---------- 10-6
10-6. Audio ---------- 10-8
10-7. Tuner (VI Model) ---------- 10-8
10-8. Tuner / VPS (VX Model) ---------- 10-9
10-9. Pre Amp ---------- 10-10
10-10. LP Skew ---------- 10-11
10-11. O S D (OPTION) ---------- 10-12
10-12. Deck Joint ---------- 10-13
10-13. Function (VX/VI-1560) ---------- 10-14
10-14. Function (VX-1561) ---------- 10-14
10-15. Speed SUB (OPTION) ---------- 10-15
10-16. Remote Control ---------- 10-16

TUNER

10-2. Timer (VX/VI-1560)



NOTE
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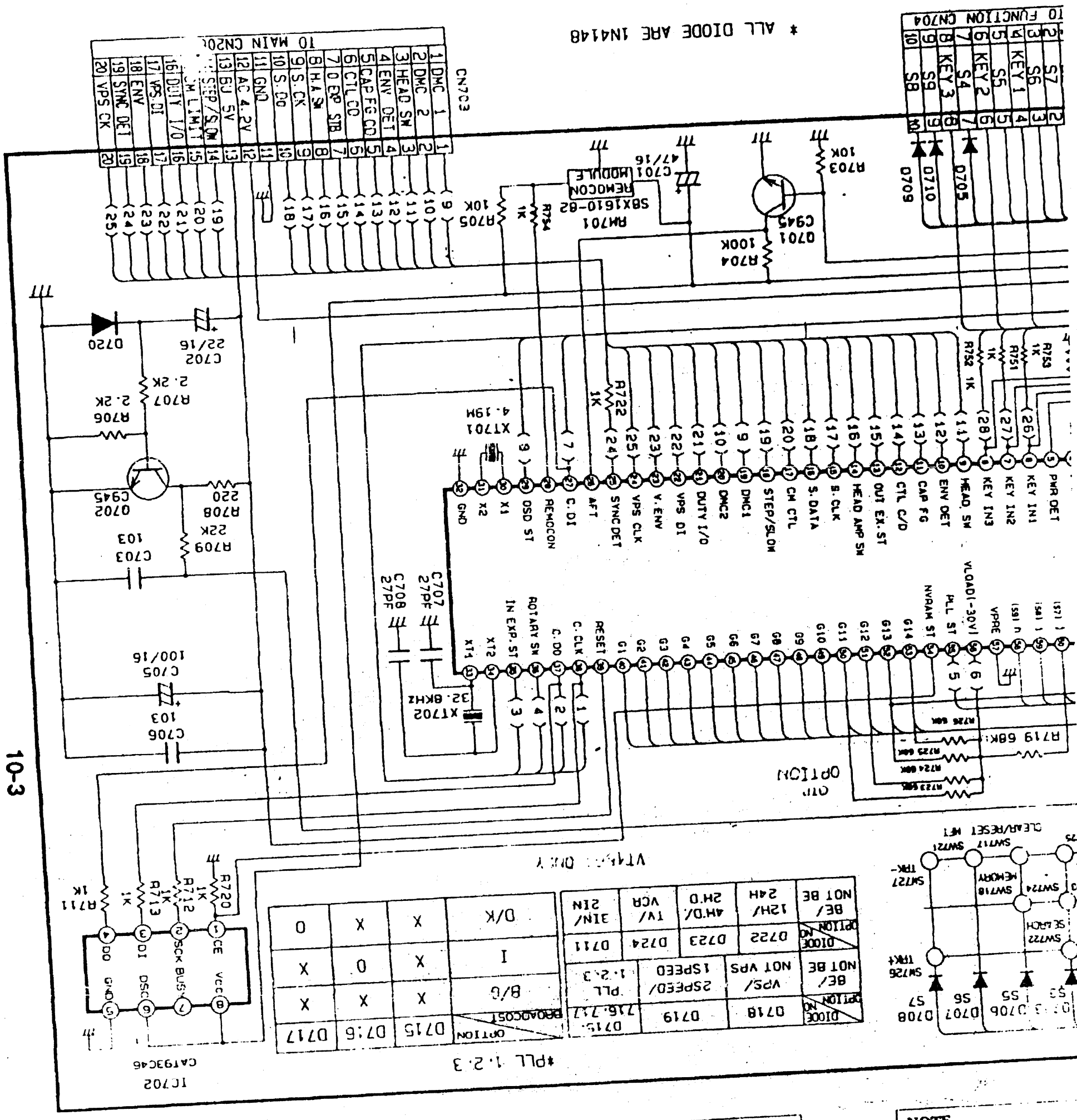

SPECIAL NOTE

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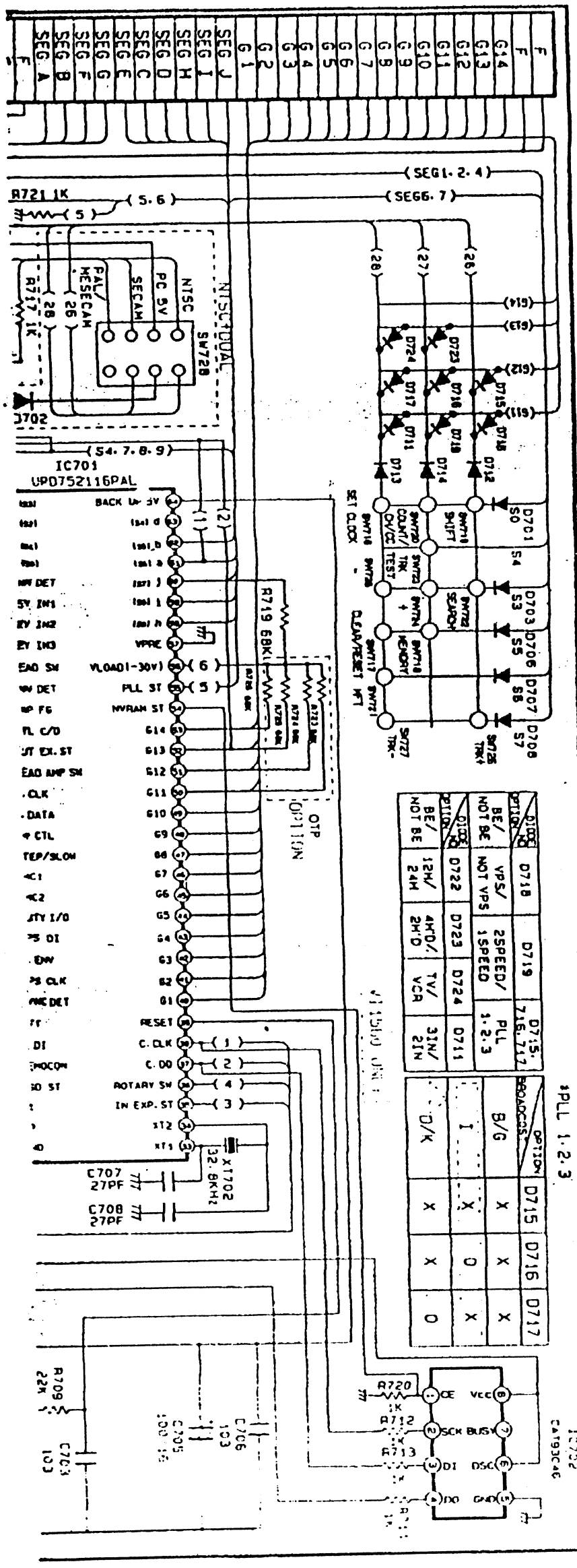
NOTE

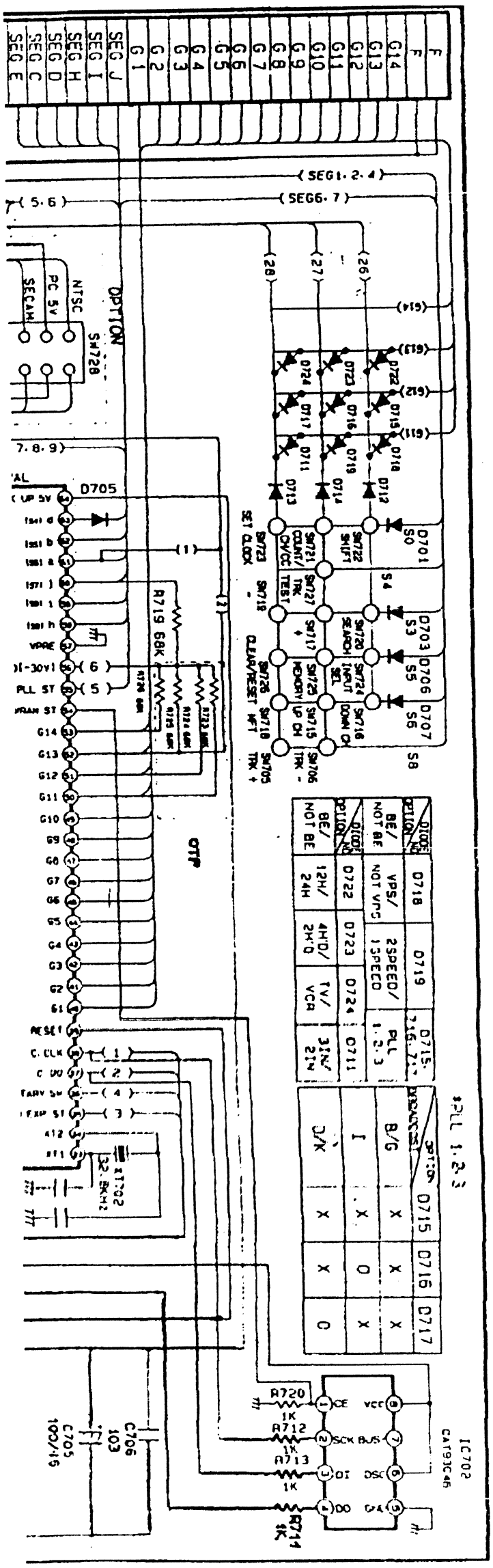
Do not use the part numbe ordering. The correct part list. And may be slightly d drawing was prepared.

TUNER

10-3. Timer



TIMER



PIN NO \ MODE	IC701								
	STOP	PLAY	REC	REW	FWD	RPS	J-RPS	J-FPS	STILL
PIN 1	-30V _ +5V					T=3.6msec			
PIN 2	-30V _ +5V					T=3.6msec			
PIN 3	-30V _ +5V					T=3.6msec			
PIN 4	-30V _ +5V					T=3.6msec			
PIN 5	5V								
PIN 6	0V								
PIN 7	0V _ +4.7V					T=3.6msec			
PIN 8	0V _ +4.7V					T=3.6msec			
PIN 9	0V _ +5V					T=40msec			
PIN 10	0V								
PIN 11	0V _ +5V								
PIN 12	0V _ +5V					T=40msec			
PIN 13	0V								
PIN 14	0V					T=27msec			
PIN 15	0V _ +5V					T=40msec			
PIN 16	0V _ +5V					T=40msec			
PIN 17	5V								
PIN 18	0V								
PIN 19	2.3V								
PIN 20	2.3V								
PIN 21	5V								
PIN 22	5V								
PIN 23	5V								
PIN 24	5V								
PIN 25	5V								
PIN 26	5V								
PIN 27	0V _ +5V								
PIN 28	5V								
PIN 29	0V								
PIN 30	+0.6V _ +4.4V					T=0.25usec			
PIN 31	0V _ +5V					T=0.25usec			
PIN 32	0V								
PIN 33	1.6V								
PIN 34	0V _ +5V					T=30usec			
PIN 35	0V _ +5V					T=40usec			
PIN 36	0V _ +5V					T=40usec			
PIN 37	0V _ +5V								
PIN 38	0V _ +5V								
PIN 39	5V								
PIN 40	-30V _ +5V					T=3.6msec			
PIN 41	-30V _ +5V					T=3.6msec			
PIN 42	-30V _ +5V					T=3.6msec			
PIN 43	-30V _ +5V					T=3.6msec			
PIN 44	-30V _ +5V					T=3.6msec			
PIN 45	-30V _ +5V					T=3.6msec			
PIN 46	-30V _ +5V					T=3.6msec			
PIN 47	-30V _ +5V					T=3.6msec			
PIN 48	-30V _ +5V					T=3.6msec			
PIN 49	-30V _ +5V					T=3.6msec			
PIN 50	-30V _ +5V					T=3.6msec			
PIN 51	-30V _ +5V					T=3.6msec			
PIN 52	-30V _ +5V					T=3.6msec			
PIN 53	-30V _ +5V					T=3.6msec			
PIN 54	0V								
PIN 55	0V								
PIN 56	-30V _ -20V								
PIN 57	0V								
PIN 58	-30V _ +5V					T=3.6msec			
PIN 59	-30V _ +5V					T=3.6msec			
PIN 60	-30V _ +5V					T=3.6msec			
PIN 61	-30V _ +5V								
PIN 62	-30V _ +5V								
PIN 63	-30V _ +5V								
PIN 64	5V								

TIMER

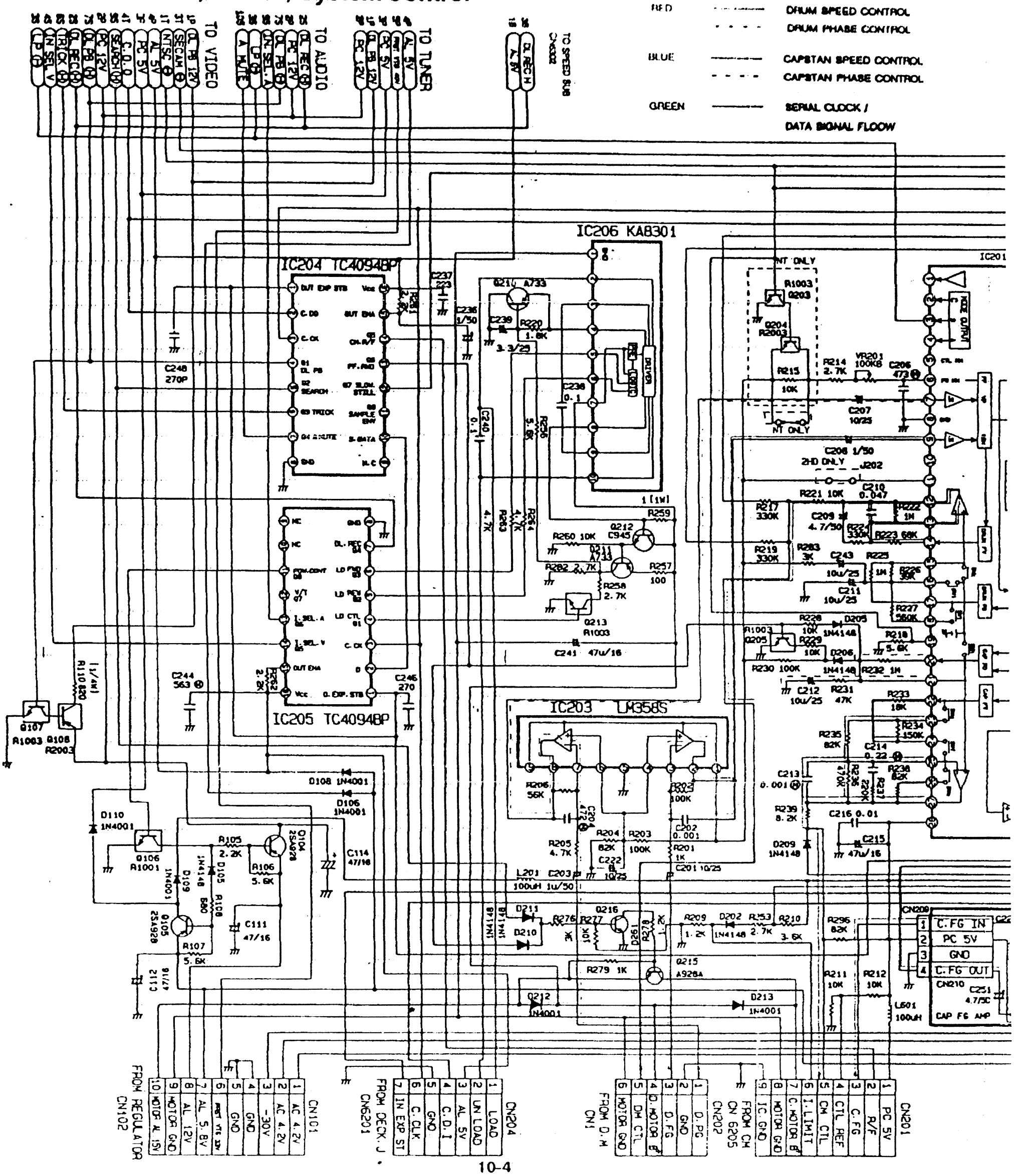
RPS : REVERSE SEARCH

J-RPS : JET REVERSE SEARCH

J-FPS : JET FORWARD SERACH

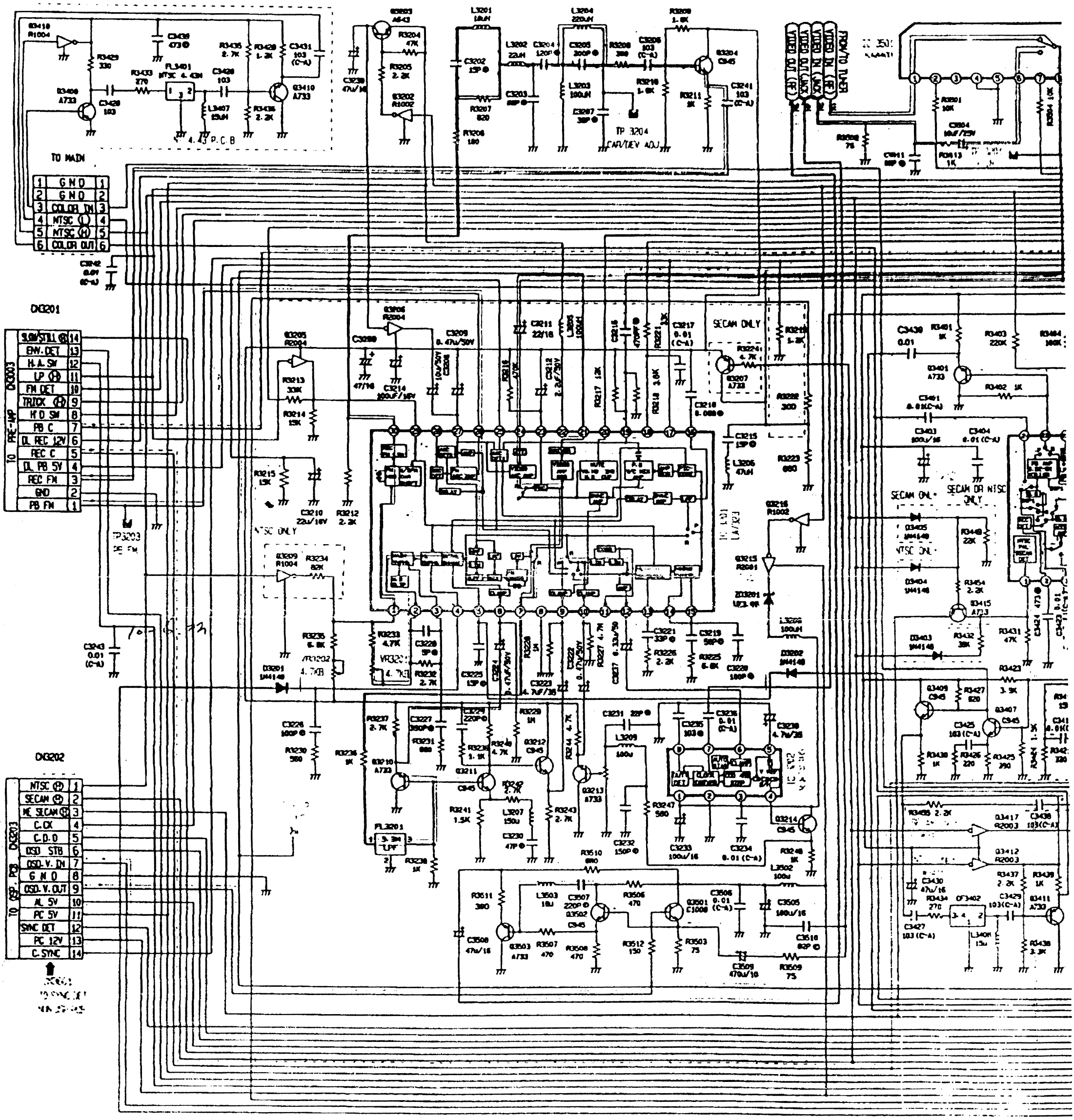
SERVO / POWER / SYSTEM CONTROL

10-4. Servo / Power / System Control



LUMINANCE/
CHROMINANCE

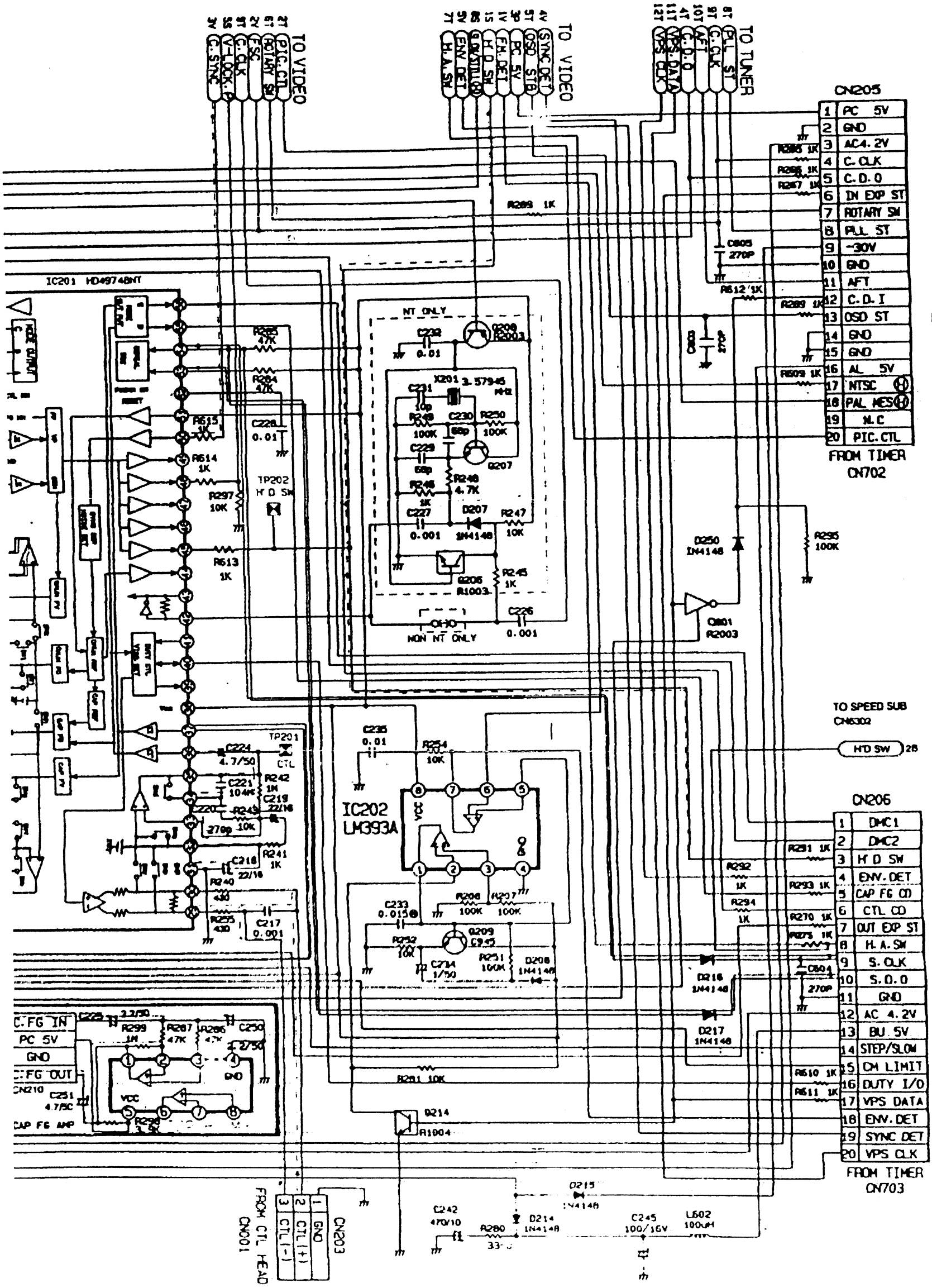
10-5. Luminance/Chrominance



R2001 : R1·R2 = 4.7K
R2002 : R1·R2 = 10K
R2003 : R1·R2 = 22K
R2004 : R1·R2 = 47K

R1001 : R1·R2 = 4.7K
R1002 : R1·R2 = 10K
R1003 : R1·R2 = 22K
R1004 : R1·R2 = 47K

SERVO / POWER / SYSTEM CONTROL



PIN NO \ MODE	STOP
PIN 1	3.5
PIN 2	0
PIN 3	0
PIN 4	5
PIN 5	0
PIN 6	0
PIN 7	2
PIN 8	0
PIN 9	2.5
PIN 10	2.5
PIN 11	5
PIN 12	2.4
PIN 13	2.4
PIN 14	2.4
PIN 15	2.5
PIN 16	2.5
PIN 17	2.5
PIN 18	2.5
PIN 19	0.1
PIN 20	5
PIN 21	2.5
PIN 22	0
PIN 23	0
PIN 24	0
PIN 25	0.5
PIN 26	5
PIN 27	5
PIN 28	5
PIN 29	2.5
PIN 30	2.5
PIN 31	0
PIN 32	2.5
PIN 33	2.5
PIN 34	2.5
PIN 35	2.5
PIN 36	2.5
PIN 37	2.7
PIN 38	5
PIN 39	0
PIN 40	0
PIN 41	5
PIN 42	2.6
PIN 43	0.5
PIN 44	2.5
PIN 45	2.5
PIN 46	2.5
PIN 47	2.5
PIN 48	0
PIN 49	0
PIN 50	0
PIN 51	5
PIN 52	5
PIN 53	5
PIN 54	5
PIN 55	5
PIN 56	0

NOTE
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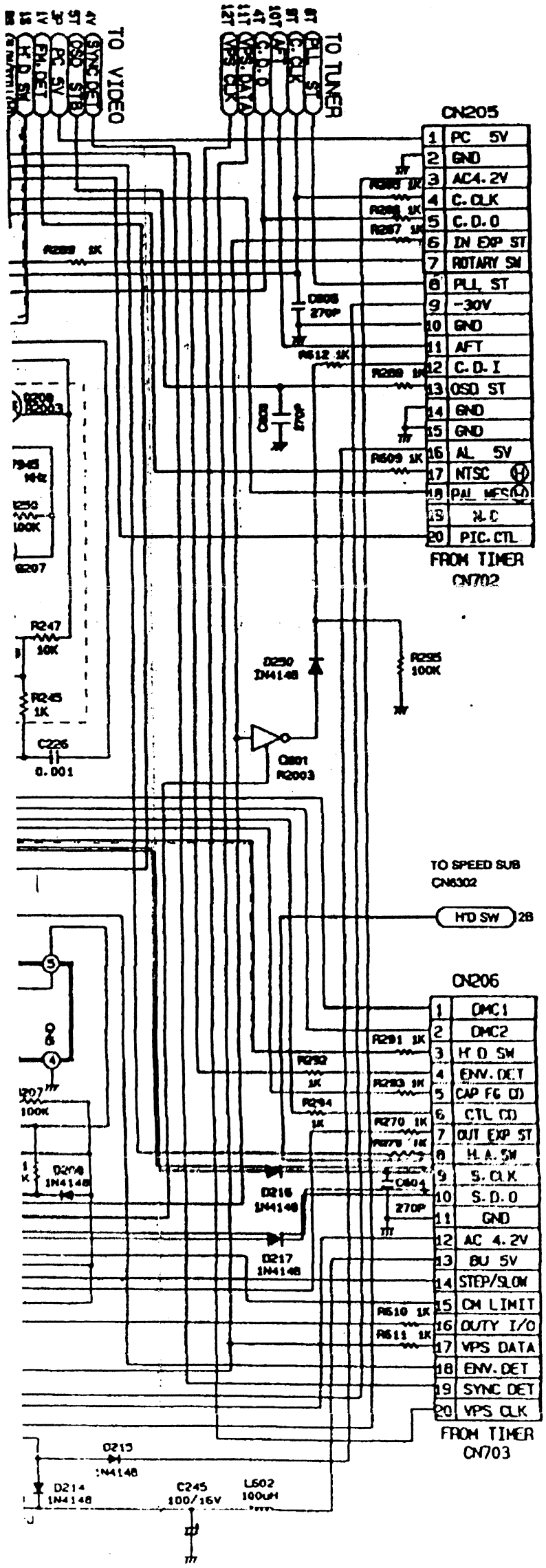
SPECIAL NOTE
All integrated circuits and many other semiconductor devices are electrostatically sensitive and therefore require the special handling techniques described under the "electrostatically sensitive (ES) devices" section of this service manual.

SERVO / POWER / SYSTEM CONTROL

SERVO / POWER / SYSTEM CONTROL



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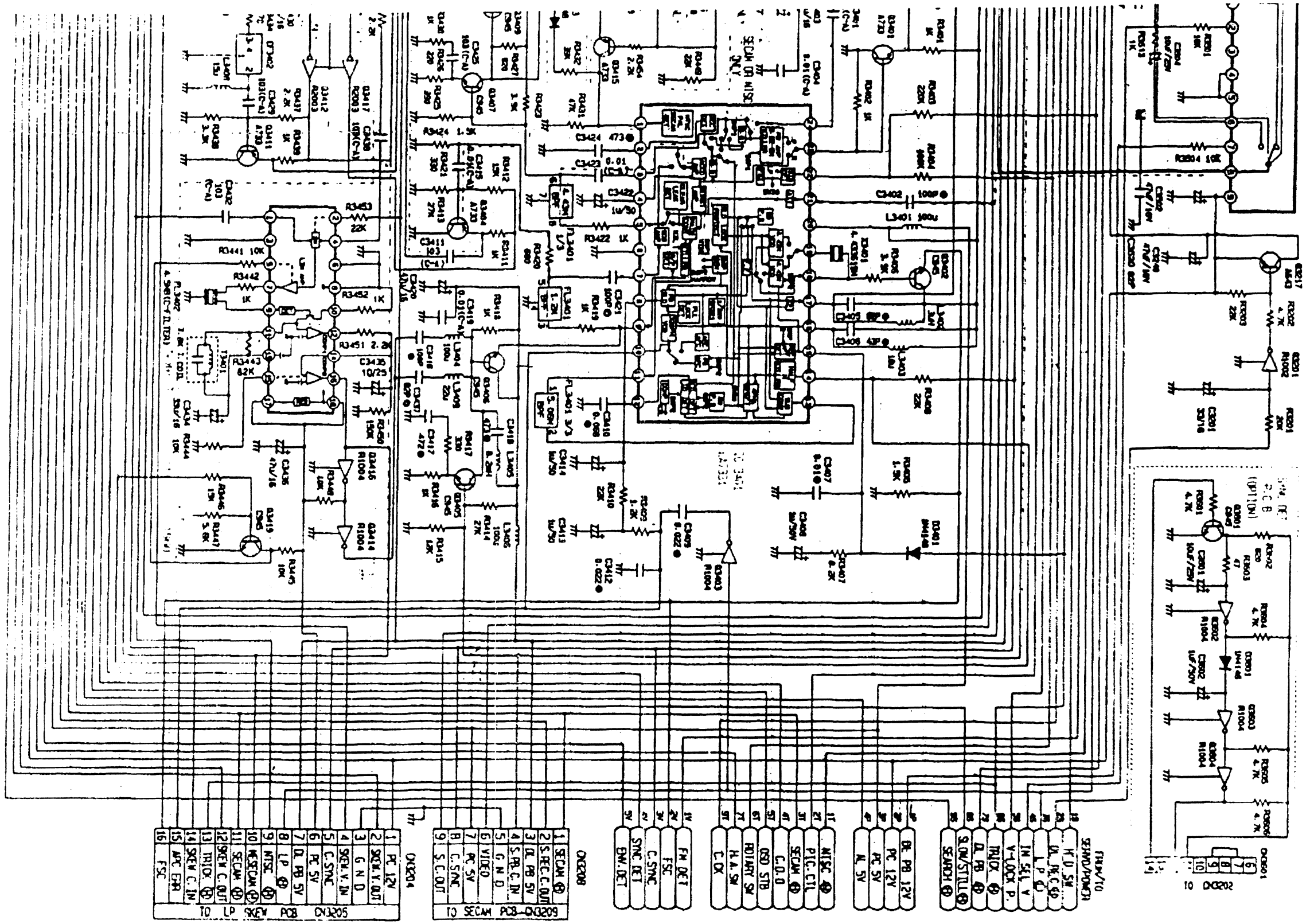
RPS : REVERSE SEARCH
J-RPS : JET REVERSE SEARCH
J-FPS : JET FORWARD SERACH

MODE / PIN NO	IC201								
	STOP	PLAY	REC	REW	FWD	RPS	J-RPS	J-FPS	STILL
PIN 1	3.5	3.5	3.5	3.5	3.5	3.5	3.5	0	3.5
PIN 2	0	0	0	0	0	0	0	0	0
PIN 3	0	0	0	0	0	0	0	0	0
PIN 4	5	5	5	5	5	5	5	5	5
PIN 5	0	0	0	0	0	0	0	0	0
PIN 6	0	0	0	0	0	0	0	0	0
PIN 7	2	2	2.1	2.1	2.1	2	2	2	2
PIN 8	0	0	0	0	0	0	0	0	0
PIN 9	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
PIN 10	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
PIN 11	5	5	5	5	5	5	5	5	5
PIN 12	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
PIN 13	2.4	2.4	2.5	2.5	2.4	2.3	2.2	2.6	2.4
PIN 14	2.4	2.4	2.5	2.5	2.4	2.3	2.2	2.6	2.4
PIN 15	2.5	2.4	2.5	2.5	2.4	2.3	2.2	2.6	2.4
PIN 16	2.5	2.5	2.5	2.5	2.4	2.3	2.2	2.6	2.4
PIN 17	2.5	2.5	2.5	2.5	2.5	2.3	2.2	2.6	2.4
PIN 18	2.5	2.3	2.4	2.4	2.4	2.3	2.3	2.6	2.4
PIN 19	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
PIN 20	5	2.5	2.5	2.5	2.5	2.5	0.1	2.5	5
PIN 21	2.5	2.5	2.5	2.5	0	2.5	0.1	2.5	2.5
PIN 22	0	2.5	2.5	2.5	2.5	2.5	2.4	2.5	0
PIN 23	0	2.5	2.5	0	2.5	2.5	2.4	2.5	1.8
PIN 24	0	2.5	2.5	0	2.5	2.5	2.5	2.5	0.2
PIN 25	0.5	2.5	2.5	2.4	2.5	2.5	2.4	2.5	2.5
PIN 26	5	2.5	2.5	2.6	2.6	2.6	2.7	2.6	2.4
PIN 27	5	2.6	2.6	2.6	2.6	2.6	2.7	2.6	3.2
PIN 28	5	5	5	5	5	5	5	5	5
PIN 29	2.5	2.4	2	2.4	2.4	2.4	2.5	2.4	2.4
PIN 30	2.5	2.5	3	2.4	2.4	2.4	2.4	2.4	2.4
PIN 31	0	0	0	0	0	0	0	0	0
PIN 32	2.5	2.5	2.5	2.4	2.4	2.4	2.4	2.5	2.4
PIN 33	2.5	2.5	2.5	2.4	2.4	2.4	2.4	2.5	2.4
PIN 34	2.5	2.5	2.5	0	0	0	0	0	0
PIN 35	2.5	2.5	2.5	2.5	2.6	2.6	2.4	2.6	2.4
PIN 36	2.5	2.5	2.5	2.5	2.6	2.6	2.4	2.6	2.4
PIN 37	2.7	2.7	2.6	2.6	2.6	2.6	2.6	2.6	2.6
PIN 38	5	5	5	5	5	5	5	5	5
PIN 39	0	0	3.6	2.5	2.5	0	3	0	5
PIN 40	0	5	5	5	5	5	0	5	5
PIN 41	5	5	5	5	5	5	0	5	5
PIN 42	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
PIN 43	0.5	2.5	2.5	2.6	2.6	2.6	2.6	2.6	2.6
PIN 44	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
PIN 45	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
PIN 46	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
PIN 47	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
PIN 48	0	0	0	0	0	0	0	0	0
PIN 49	0	0	0	0	0	5	5	5	
PIN 50	0	0	0.4	0.4	0.4	0.4	0.4	0.4	0.4
PIN 51	5	5	5	5	5	5	5	5	5
PIN 52	5	5	5	5	5	5	5	5	5
PIN 53	5	5	5	5	5	5	5	5	5
PIN 54	5	5	5	5	5	5	5	5	5
PIN 55	5	0	2.5	2.5	0	0	2.5	0	5
PIN 56	0	0	5	2.5	2.5	0	2.5	0	5



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All integrated circuits and many other semiconductor devices are electrostatically sensitive and therefore require the special handling techniques described under the "electrostatically sensitive (ES) devices" section of this service manual.

NOTE
Do not use the part number shown on this drawing for ordering. The correct part number is shown in the parts list. And may be slightly different or amended since this drawing was prepared.

LUMINANCE/
CHROMINANCE

SERVO/POWER/
SYSTEM CONTROL

RPS : REVERSE SEARCH
J-RPS : JET REVERSE SEARCH
J-FPS : JET FORWARD SERACH

PIN NO \ MODE	--			IC204					
	STOP	PLAY	REC	REW	FWD	RPS	J-RPS	J-FPS	STILL
PIN 1	0	0	0	0	0	0	0	0	0
PIN 2	1.6	1.7	1.9	1.9	1.9	1.1	1.2	1.1	1.7
PIN 3	3	3	3.2	3.2	3.2	2	2	2	2
PIN 4	0	0	5	5	0	0	4.7	4.8	5
PIN 5	0	5	4.9	4.9	0	0	4.7	4.7	5
PIN 6	0	0	0	0	4.9	4.8	4.7	4.8	0
PIN 7	0	0	5	0	0	5	5	5	0
PIN 8	0	0	0	0	0	0	0	0	0
PIN 9	3	3	3.2	3.2	3.2	1.7	1.7	1.7	2
PIN 10	1.7	1.7	1.7	1.7	1.7	1.9	1.9	1.7	1.1
PIN 11	0	5	5	5	5	0	0	0	5
PIN 12	0	5	5	5	5	0	0	0	5
PIN 13	0	5	5	0	5	0	0	0	5
PIN 14	0	0	0	0	0	5	5	0	0
PIN 15	4.2	5	5	5	5	4.1	4.1	4.2	5
PIN 16	5	0	5	5	5	5	5	5	5

RPS : REVERSE SEARCH
J-RPS : JET REVERSE SEARCH
J-FPS : JET FORWARD SERACH

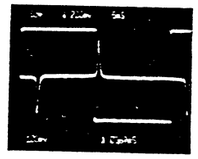
PIN NO \ MODE	IC205								
	STOP	PLAY	REC	REW	FWD	RPS	J-RPS	J-FPS	STILL
PIN 1	0	0	0	0	0	0	0	0	0
PIN 2	0	1.7	1.7	1.8	1.7	1.9	1.9	1.9	1.1
PIN 3	3	3	3.2	3.2	3.2	2	2	2	0
PIN 4	5	5	0	0	0	0	5	5	4.7
PIN 5	5	0	0	0	0	0	4.9	5	0
PIN 6	0	0	0	0	0	0	4.9	5	4.7
PIN 7	0	0	0	0	0	0	0	0	5
PIN 8	0	0	0	0	0	0	0	0	0
PIN 9	3	3	3.1	3.2	3	2	2	2	1.7
PIN 10	1.7	1.7	1.9	1.9	1.9	1.1	1.1	1.1	1.9
PIN 11	5	0	0	0	0	0	5	5	0
PIN 12	5	0	0	0	0	0	5	5	5
PIN 13	5	0	0	4.6	4.6	5	0	5	0
PIN 14	0	0	0	5	0	0	0	0	0
PIN 15	5	4.2	4.1	4.1	4.1	5	5	5	4.1
PIN 16	5	5	5	5	5	5	5	0	5

	Q104			Q105			Q107		
	E	C	B	E	C	B	E	C	B
STOP	12.2	12.1	11.4	5.88	5.80	5.1	0	0	0
PB	12.2	12.1	11.4	5.87	5.80	5.1	0	0	0
REC	12.17	12.1	11.38	5.86	5.80	5.09	0.2	-0.43	10.99

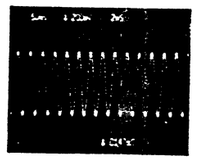
SERVO/POWER/
SYSTEM CONTROL

RPS : REVERSE SEARCH
J-RPS : JET REVERSE SEARCH
J-FPS : JET FORWARD SERACH

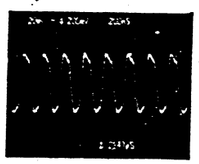
T R \ MODE		STOP	PLAY	REC	REW	FWD	RPS	J-RPS	J-FPS	STILL	FPS
Q210 A733	E	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
	B	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
	C	0	0	0	0	0	0	0	0	0	0
Q211 A733	E	14.8	14.8	14.8	14.8	14.8	14.8	14.8	14.8	14.8	14.8
	B	14	14	14	14	14	14	14	14	14	14
	C	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
Q212 C945	E	14	14	14	14	14	14	14	14	14	14
	B	14.8	14.8	14.8	14.8	14.8	14.8	14.8	14.8	14.8	14.8
	C	14.8	14.8	14.8	14.8	14.8	14.8	14.8	14.8	14.8	14.8
Q213 R1004	E	0	0	0	0	0	0	0	0	0	0
	B	5	5	5	5	5	5	5	5	5	5
	C	0	0	0	0	0	0	0	0	0	0
Q216 D261	E	0	0	0	0	0	0	0	0	0	0
	B	0	0	0.7	0.7	0.7	0.7	0.7	0.7	0	0
	C	15	15	0	0	0	0	0	0	15	15
Q215 A928	E	15	15	14.5	14.5	14.5	14.5	14.5	14.5	15	15
	B	15	15	15	15	15	15	15	15	15	15
	C	13.6	13.6	15	15	15	15	15	15	13.6	13.6
Q205 R1003	E	0	0	0	0	0	0	0	0	0	0
	B	0	0	5	5	5	5	5	5	0	0
	C	5	5	0	0	0	0	0	0	5	5
Q214 R1004	E	0	0	0	0	0	0	0	0	0	0
	B	5	5	5	5	5	5	5	5	5	5
	C	0	0	0	0	0	0	0	0	0	0
Q209 C945	E	4	4	4	4	4	4	4	4	4	4
	B	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
	C	5	5	5	5	5	5	5	5	5	5



IC201-35
CTL PULSE/2Vp-p
PB

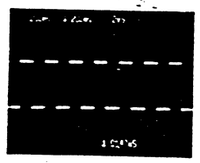


IC201-37
C.FG/1.75Vp-p
PB

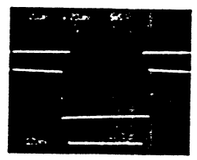


IC201-42
4.43MHz/0.6Vp-p
PB

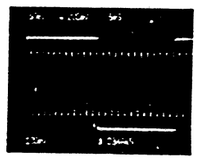
IC201-48
V-LOCK PULSE
PB



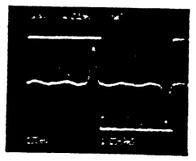
IC201-55
C.FG/5Vp-p
PB



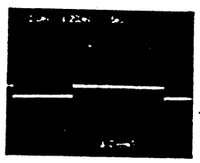
IC201-56
CTL PULSE/5Vp-p
PB



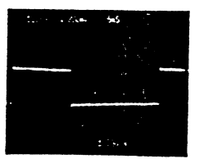
IC203-2
D.FG/1.7Vp-p
PB



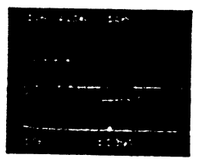
IC203-8
D.PG/2Vp-p
PB



CN203-2
CTL PULSR
REC



CN203-3
CTL PULSE
REC



TP201
H'd S/W PULSE
PB/REC

LUMINANCE/ CHROMINANCE

RPS : REVERSE SEARCH
J-RPS : JET REVERSE SEARCH
J-FPS : JET FORWARD SERACH

MODE / PIN NO	IC3401								
	STOP	PLAY	REC	REW	FWD	RPS	J-RPS	J-FPS	STILL
PIN 1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
PIN 2	1.5	1.4	1.4	1.4	1.4	1.4	1.4	1.3	1.4
PIN 3	3	3	3.1	3.1	3.1	3	3	3	3
PIN 4	2.5	2.5	2.5	2.5	2.5	2.4	2.4	2.4	2.4
PIN 5	1.7	2.5	1.7	1.6	1.7	2.6	2.6	2.6	2.6
PIN 6	0	0	0	0	0	0	0	0	0
PIN 7	3	3	3.1	3.1	3	3	3	3	3
PIN 8	2.9	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
PIN 9	1.8	3.8	1.8	1.8	1.8	3.8	3.8	3.9	3.9
PIN 10	2.9	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
PIN 11	2.6	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
PIN 12	2	1.9	1.9	1.9	1.9	2	2	2	2
PIN 13	4.6	4.6	4.6	4.6	4.6	4.5	4.5	4.5	4.6
PIN 14	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
PIN 15	2.3	2.3	2.3	2.3	2.3	4.2	4.2	4.2	4.2
PIN 16	5	4.9	4.9	4.9	4.8	4.8	4.8	4.8	4.8
PIN 17	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
PIN 18	2.9	2.3	2.9	2.9	2.9	2.2	2.2	2.2	2.2
PIN 19	3.9	3.8	3.9	3.9	3.9	3.8	3.8	3.8	3.8
PIN 20	5	5	5	5	5	4.9	5	4.9	5
PIN 21	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
PIN 22	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
PIN 23	2.2	1.7	2.2	2.2	1.7	1.7	1.7	1.7	1.8
PIN 24	2.1	2.3	3.1	3.1	3.1	3.3	3.3	3.3	3.3

RPS : REVERSE SEARCH
J-RPS : JET REVERSE SEARCH
J-FPS : JET FORWARD SERACH

MODE / PIN NO	IC3402								
	STOP	PLAY	REC	REW	FWD	RPS	J-RPS	J-FPS	STILL
PIN 1	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
PIN 2	0.3	1.2	0.3	0.3	0.3	1.2	1.2	1.2	1.2
PIN 3	0	0	0	0	0	0	0	0	0
PIN 4	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
PIN 5	5.1V / 0.2V								
PIN 6	0	0	0	0	0	0	0	0	0
PIN 7	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
PIN 8	0	0	0	0	0	0	0	0	0
PIN 9	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
PIN 10	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
PIN 11	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
PIN 12	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
PIN 13	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
PIN 14	0	0	0	0	0	0	0	0	0
PIN 15	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
PIN 16	4.5 : MESECAM (H) / 0.1 : PAL (L)								
PIN 17	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1
PIN 18	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1

LUMINANCE/ CHROMINANCE

RPS : REVERSE SEARCH
J-RPS : JET REVERSE SEARCH
J-FPS : JET FORWARD SERACH

MODE / PIN NO	IC3201 (LA7323)								
	STOP	PLAY	REC	REW	FWD	RPS	J-RPS	J-FPS	STILL
PIN 1	2.2	3.6	2.2	2.2	2.2	3.5	2.5	3.6	3.5
PIN 2	2.5	2.6	2.5	2.5	2.5	2.6	2.6	2.6	2.6
PIN 3	2.5	2.2	2.5	2.5	2.5	2.2	2.2	2.2	2.2
PIN 4	3.3	2.7	3.3	3.3	3.3	4.5	4.5	4.5	4.5
PIN 5	2.7	4.5	2.7	2.7	2.7	4.5	4.5	4.5	4.5
PIN 6	3.4	1.6	3.5	3.4	3.4	1.4	1.4	1.4	1.4
PIN 7	2.9	2.4	2.8	2.7	2.7	2.4	2.4	2.4	2.4
PIN 8	0	0	0	0	0	0	0	0	0
PIN 9	1	3.4	1	0.8	0.8	3.4	3.4	3.4	3.4
PIN 10	3.1	3.4	3.2	3.2	3.2	3.4	3.4	3.4	3.4
PIN 11	3.7	0.2	3.4	3.6	3.7	3.8	3.7	3.7	3.7
PIN 12	2.9	2.9	3	3	3	2.9	3	3	3
PIN 13	4.4	3.2	4.4	4.4	4.4	3.3	3.3	3.4	3.4
PIN 14	4.4	3.2	4.4	4.4	4.4	3.3	3.2	3.4	3.4
PIN 15	4.4	4	4.4	4.4	4.4	4	4	4	4
PIN 16	3.5	3.4	4.4	3.4	3.4	3.4	3.4	3.4	3.4
PIN 17	0.4	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4
PIN 18	2.5	2.4	2.5	2.5	2.5	2.5	2.5	0	2.5
PIN 19	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2
PIN 20	0	0	0	0	0	0.1	0.1	0.1	0.1
PIN 21	2.6	2.4	2.5	2.5	2.5	2.4	2.4	2.4	2.4
PIN 22	5	5	5	5	5	5	5	5	5
PIN 23	3.5	3.2	3.6	3.6	3.5	3.2	3.2	3.2	3.2
PIN 24	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
PIN 25	2.9	3.6	2.9	2.9	2.9	3.7	3.7	3.7	3.7
PIN 26	3.5	3.6	3.5	3.5	3.5	3.6	3.6	3.6	3.6
PIN 27	1.4	0.8	1.5	1.5	1.5	0.8	0.8	0.8	0.8
PIN 28	0	0.1	0	0	0	0.1	0.1	0.1	0.1
PIN 29	5	5	5	5	5	5	5	5	5
PIN 30	3.4	4	3.4	3.4	3.4	4	4	4	4

RPS : REVERSE SEARCH
J-RPS : JET REVERSE SEARCH
J-FPS : JET FORWARD SERACH

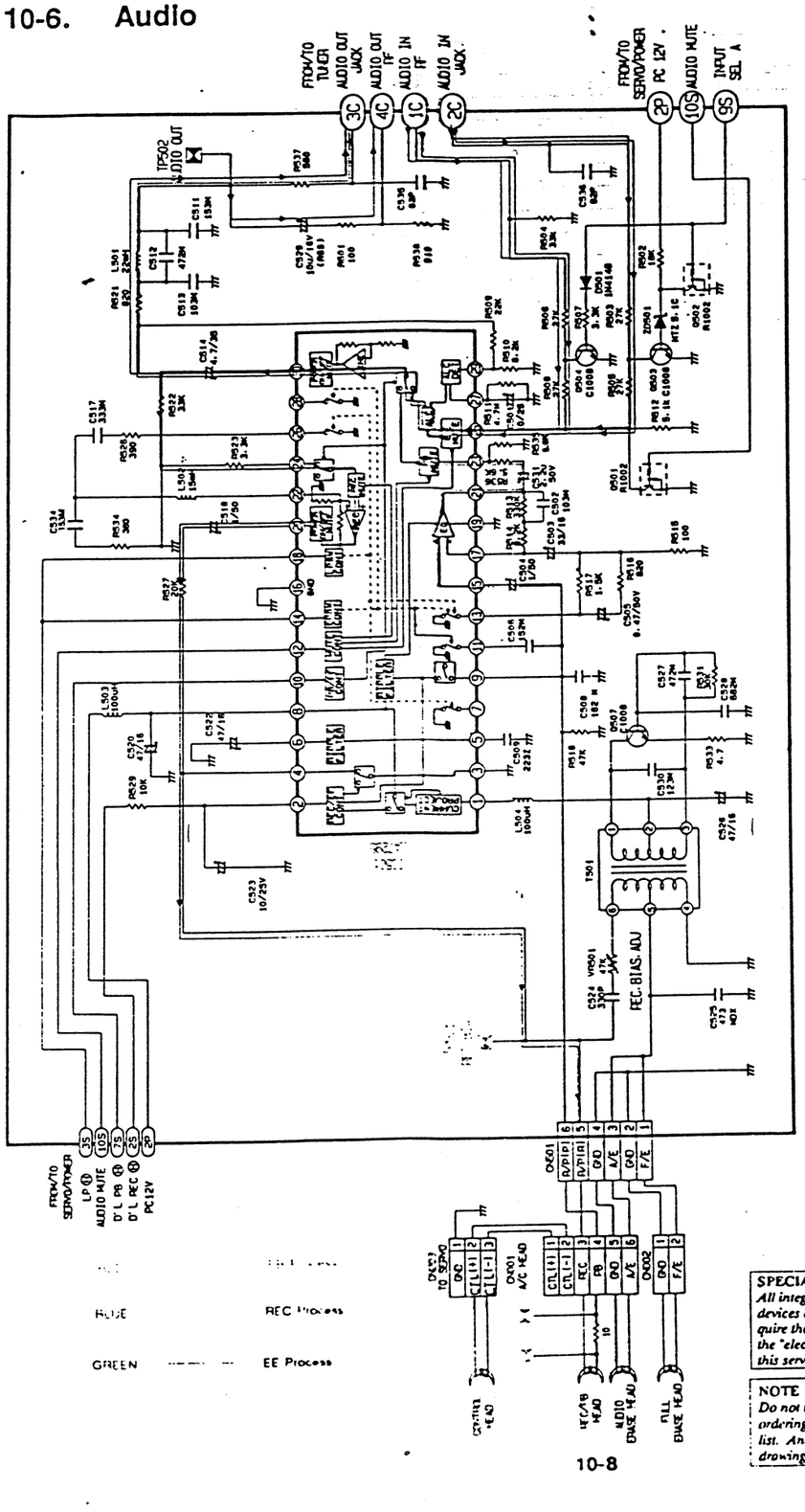
MODE / PIN NO	IC3202 (MSM7401RS)								
	STOP	PLAY	REC	REW	FWD	RPS	J-RPS	J-FPS	STILL
PIN 1	0	8.6	0	0	0	8.6	8.6	8.6	8.6
PIN 2	0	0	0	0	0	0	0	0	0
PIN 3	0	8.6	0	0	0	8.6	8.6	8.6	8.6
PIN 4	0	3.0	0	0	0	3.0	3.3	3.3	3.3
PIN 5	3.0	3.3	0.6	3.1	3.0	3.3	3.3	3.3	3.3
PIN 6	0.3	2.2	0.3	0.4	0.4	2.2	2.2	2.2	2.2
PIN 7	0	1.6	0	0	0	1.6	1.6	1.6	1.6
PIN 8	0	4.9	0	0	0	4.9	4.9	4.9	4.9

MODE / PIN	IC3501(KA8403)								
	1	2	3	4	5	6	7	8	9
STOP	8.2	4.8	8.2	0	0	8.2	0	7.5	11.9
REC	8.2	4.8	8.2	0	0	8.2	0	7.5	11.9
PLAY	8.2	4.8	8.2	0	0	8.2	8.8	7.5	11.9

AUDIO

AUDIO

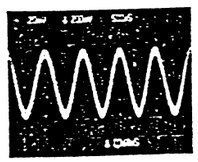
10-6. Audio



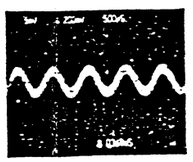
REV.S : REVERSE SEARCH
FWD.S : FORWARD SERACH

IC 501

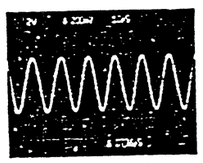
MODE / PIN NO	STOP	REC	PLAY	REW	F. FWD	REV. S	FWD. S
PIN 1	0	10.8	OPEN	0	0	OPEN	OPEN
PIN 2	0	4.6	0	0	0	0	0
PIN 3	0	0	0	0	0	0	0
PIN 4	0	0	0	0	0	0	0
PIN 5	8	8	8	8	8	8	8
PIN 6	9	9	9	9	9	9	9
PIN 7	0	0	0	0	0	0	0
PIN 8	12	12	12	12	12	12	12
PIN 9	0	0	0	0	0	0	0
PIN 10	0	0	4.6	0	0	4.6	4.6
PIN 11	0	0	0	0	0	0	0
PIN 12	0	0	0	0	0	0	0
PIN 13	0	0	0	0	0	0	0
PIN 14	0	0	0	0	0	0	0
PIN 15	2.2	2.2	2.2	2.2	2.2	2.2	2.2
PIN 16	0	0	0	0	0	0	0
PIN 17	2.4	2.4	2.4	2.4	2.4	2.4	2.4
PIN 18	0	0	0	0	0	0	0
PIN 19	0	0	0	0	0	0	0
PIN 20	4	4	4	4	4	4	4
PIN 21	2.4	2.4	2.4	2.4	2.4	2.4	2.4
PIN 22	1.4	1.4	1.4	1.4	1.4	1.4	1.4
PIN 23	0	0	0	0	0	0	0
PIN 24	0	0	0	0	0	0	0
PIN 25	0	0	0	0	0	0	0
PIN 26	0	0	0	0	0	0	0
PIN 27	0.34	0.34	0.34	0.34	0.34	0.34	0.34
PIN 28	0	0	0	0	0	0	0
PIN 29	0	0	0	0	0	0	0
PIN 30	4	4	4	4	4	4	4



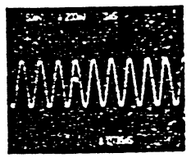
IC501-20
REC AMP IN/0.75Vp-p
REC



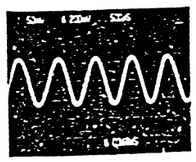
IC501-25
AUDIO IN 100mVp-p
EE/REC



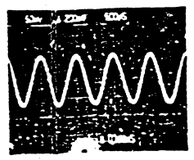
TP501
REC BIAS/6Vp-p
REC



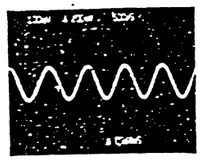
TP502
EE AUDIO OUT/1.7Vp-p
EE



TP502
PB AUDIO OUT/1.2Vp-p
PB



TP502
REC AUDIO OUT:1.4Vp-p
REC



SCART JACK
AUDIO IN/1.8Vp-p

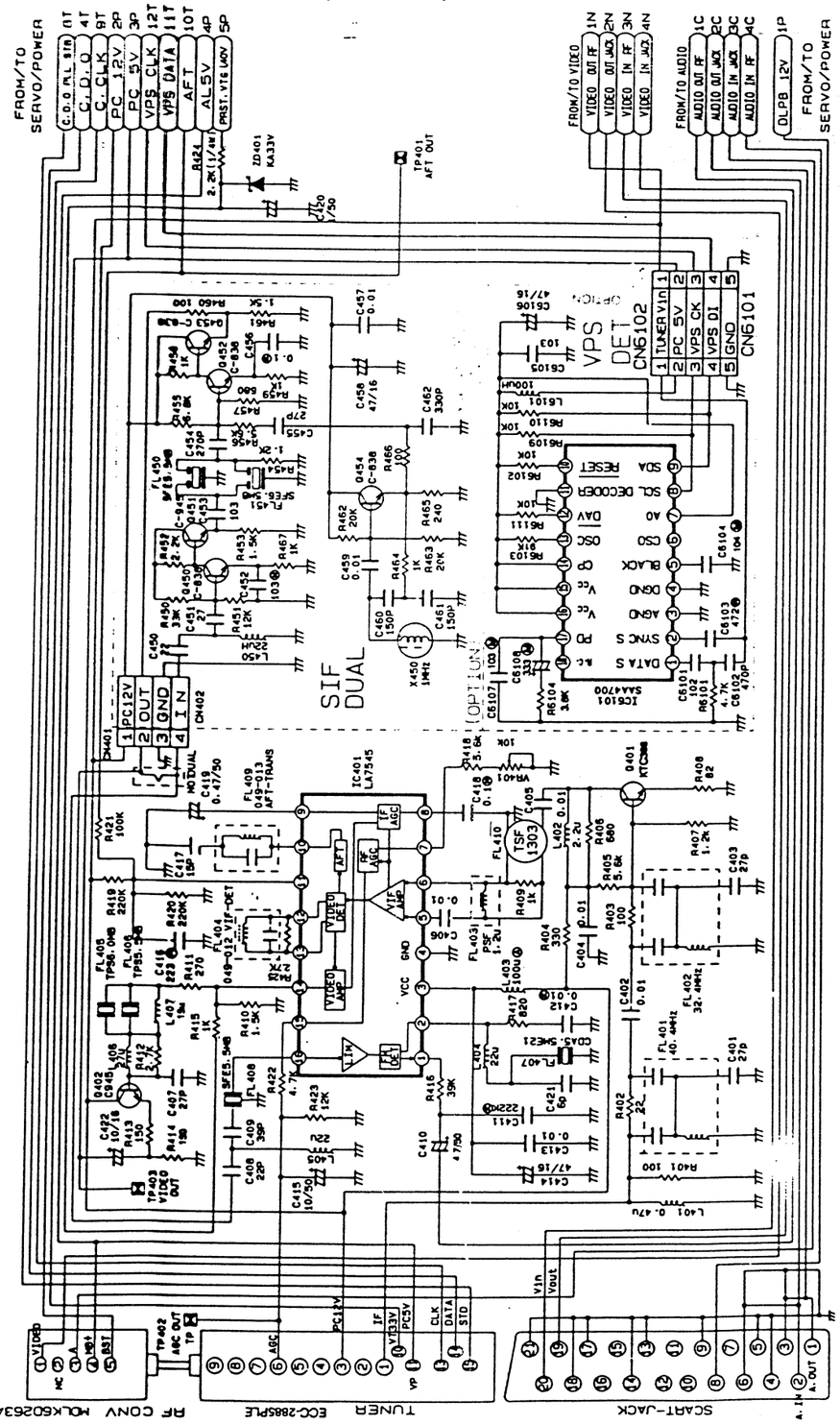
SPECIAL NOTE
All integrated circuits and many other semiconductor devices are electrostatically sensitive and therefore require the special handling techniques described under the "electrostatically sensitive (ES) devices" section of this service manual.

NOTE
Do not use the part number shown on this drawing for ordering. The correct part number is shown in the parts list. And may be slightly different or amended since this drawing was prepared.

TUNER / VPS

TUNER / VPS

10-8. Tuner / VPS (VX Model)



MODE / PIN NO	IC6101			
	STOP	PLAY	REC	VPS TIMER REC
PIN 1	+2V _ +3.5V			
PIN 2	+2V _ +3.5V			
PIN 3	0V			
PIN 4	0V			
PIN 5	+4.5V _ +5V T=10msec			
PIN 6	0V _ +4.6V			
PIN 7	5V			
PIN 8	5V		+0V _ +5V	
PIN 9	5V		+0V _ +5V	
PIN 10	5V			
PIN 11	0V			
PIN 12	5V		+0V _ +5V T=40msec	
PIN 13	0.8V			
PIN 14	5V			
PIN 15	5V			
PIN 16	5V			
PIN 17	1.2V			
PIN 18	0V			

NOTE
Do not use the part number shown on this drawing for ordering. The correct part number is shown in the parts list. And may be slightly different or amended since this drawing was prepared.

SPECIAL NOTE
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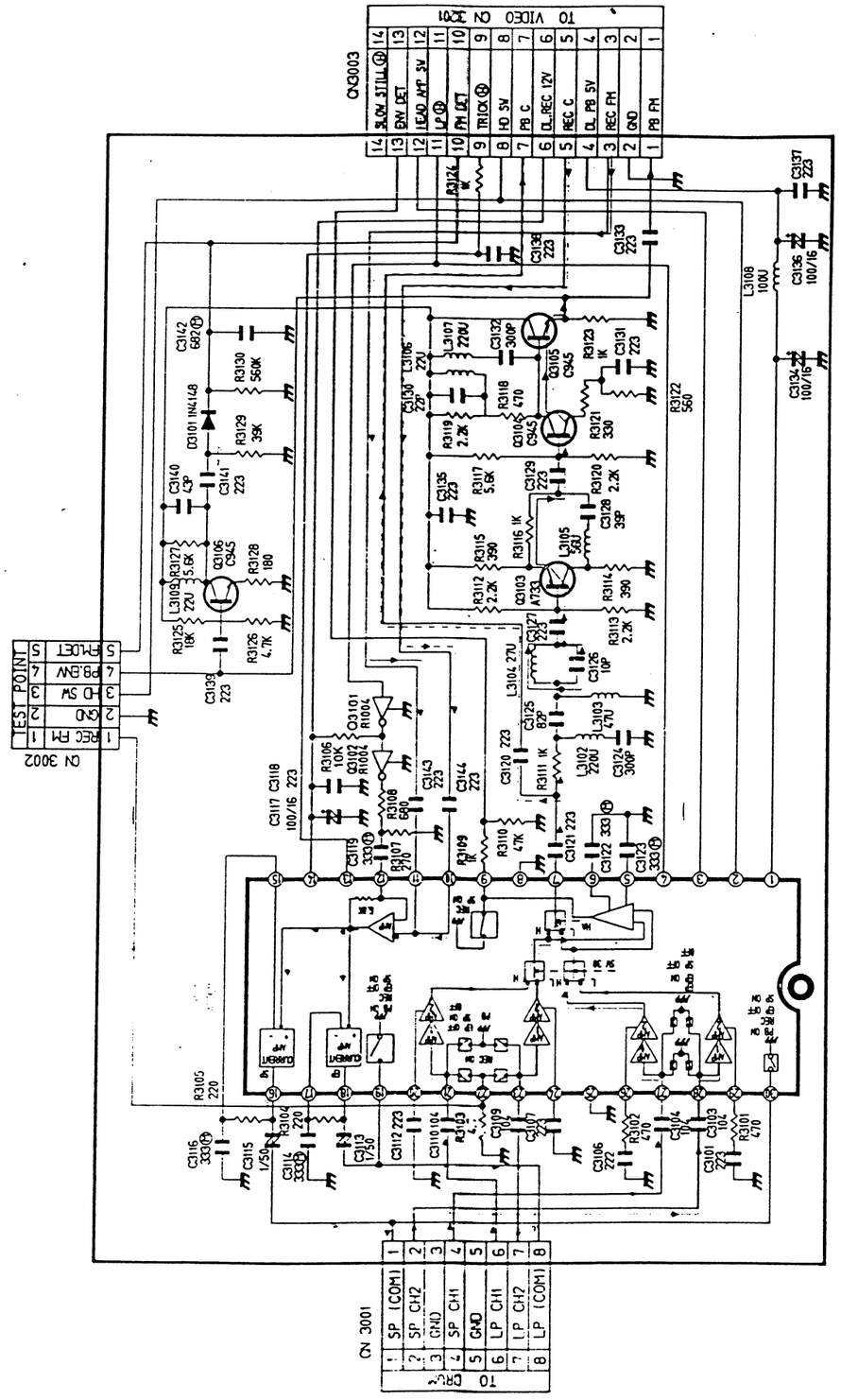
PRE-AMP

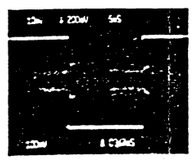
PRE-AMP

10-9. Pre Amp



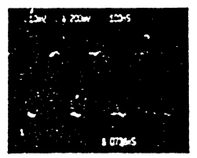
PB Luminance
PB Color
REC Luminance
REC Color
RED
BLUE

MODE / PIN NO.	IC3101 LA7321		
	STOP	PLAY	REC
PIN 1	0.21	0.2	5
PIN 2	5	H. SW 29Hz	⟵
PIN 3	0.8	0	0
PIN 4	0	0	0
PIN 5	0	0	1.5
PIN 6	0	0	1.5
PIN 7	0	0	1.2
PIN 8	0	0	0
PIN 9	0	0	0
PIN 10	0	6.8	0
PIN 11	0.4Vpp	6.8+0.41Vpp	0
PIN 12	0	6+0.21Vpp	0
PIN 13	0	0	0
PIN 14	0	12	0
PIN 15	0	6	0.2
PIN 16	0	6+6Vpp	0
PIN 17	0	0.4	0
PIN 18	0	0.4	0
PIN 19	0	0	0
PIN 20	0	0	0
PIN 21	0	0	0
PIN 22	0	0	0
PIN 23	0	0	0
PIN 24	0	0	4
PIN 25	0	0	0
PIN 26	0	0	2
PIN 27	0	0	0.8
PIN 28	0	0	0.8
PIN 29	0	0	2
PIN 30	0	4Vpp	0



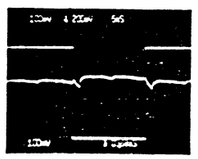
IC3101-3
ENV/2Vp-p
PB

IC3102-1
REC FM/150mVp-p
REC



WAFER CN3102-3
REC FM/350mVp-p
REC

WAFER CN3102-4
ENV/300mVp-p
PB



WAFER CN3102-5
FM DET/0.5Vp-p
PB

SPECIAL NOTE
All integrated circuits and many other semiconductor devices are electrostatically sensitive and therefore require the special handling techniques described under the "electrostatically sensitive (ES) devices" section of this service manual.

NOTE
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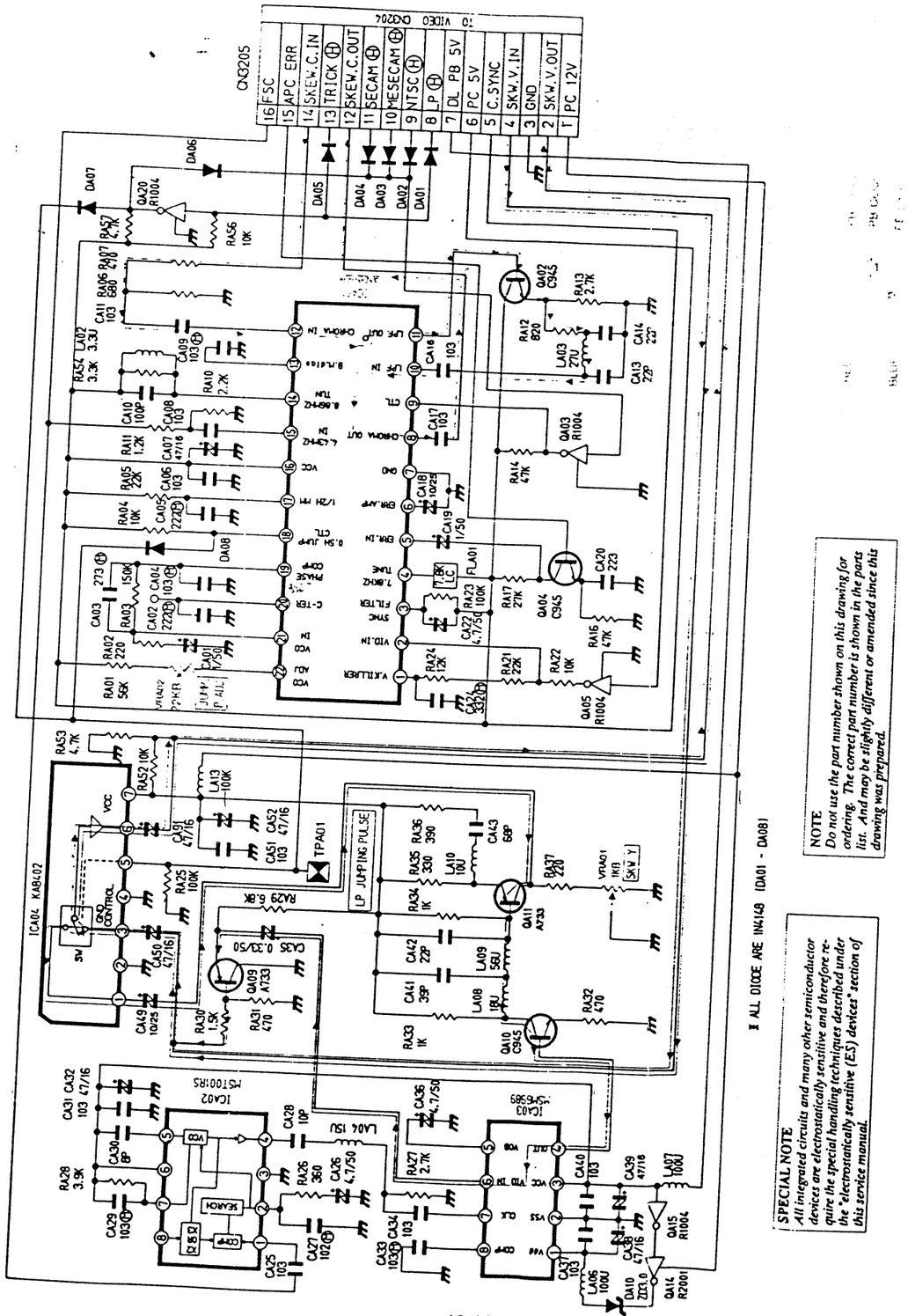
LP SKEW

LP SKEW

10-10. LP Skew



I ALL DIODE ARE IN4148 (DA01 - DA08)

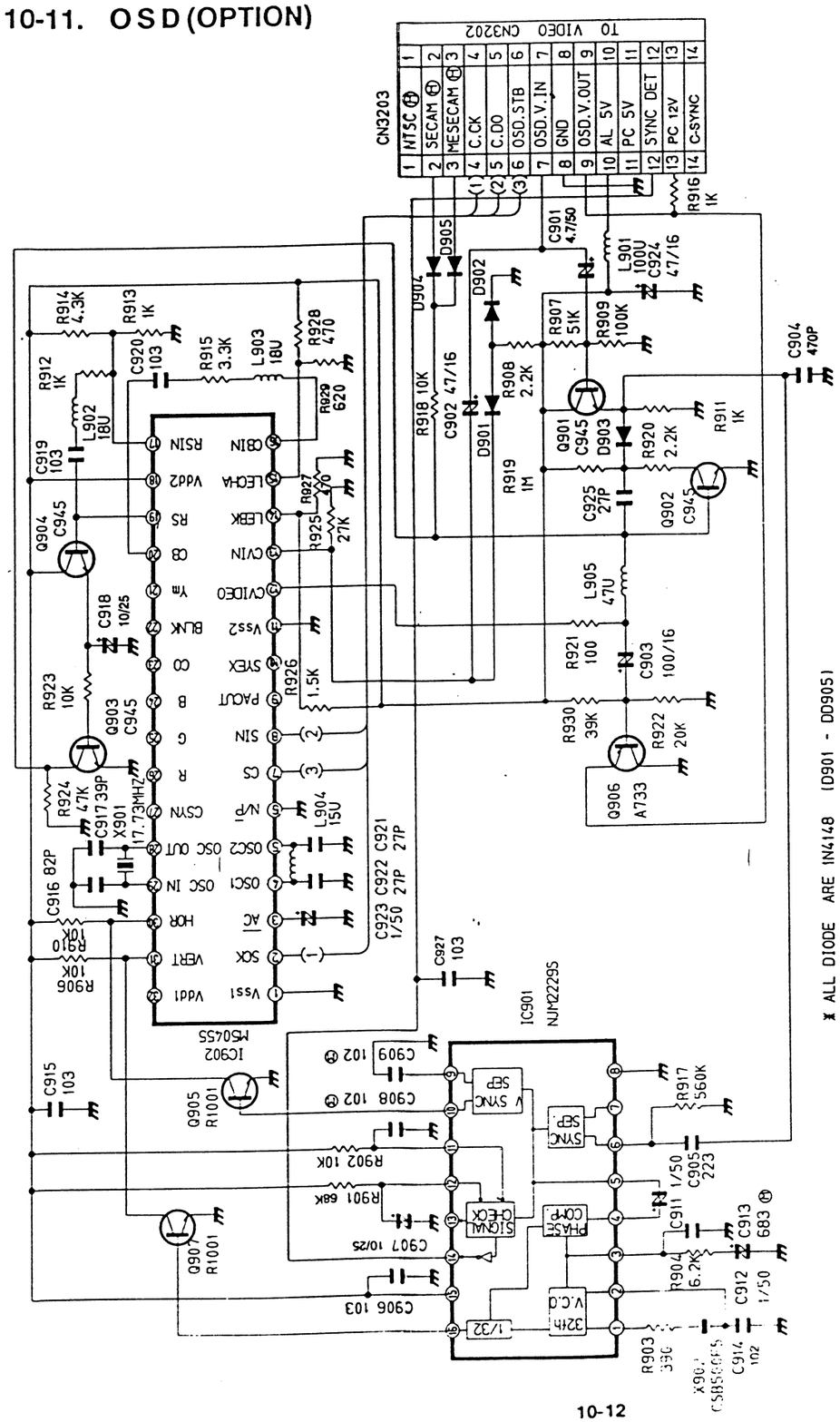
SPECIAL NOTE
All integrated circuits and many other semiconductor devices are electrostatically sensitive and therefore require the special handling techniques described under the "electrostatically sensitive (ES) devices" section of this service manual.

NOTE
Do not use the part number shown on this drawing for ordering. The correct part number is shown in the parts list. And may be slightly different or amended since this drawing was prepared.

PIN NO \ MODE	ICA01 AN3592K		
	STOP	PLAY	REC
PIN 1	0		0
PIN 2	2.8		2.8
PIN 3	3.2	4	3.2
PIN 4	540.88Vpp	5	5
PIN 5	3.2	3.2	3.2
PIN 6	2.8	2.8	2.4
PIN 7	0	0	0
PIN 8	2.8	2.8	2.4
PIN 9	0	0	0
PIN 10	3.2	3.2	3.2
PIN 11	3.6	3.6	3.6
PIN 12	3.6	3.5	3.6
PIN 13	3.6	3.5	3.6
PIN 14	5	5	5
PIN 15	5	5	5
PIN 16	5	5	5
PIN 17	5		0
PIN 18	5	0	4.8
PIN 19	0	2.2	0.4
PIN 20	1.2		
PIN 21	0.2	2.2	0
PIN 22	0.8.	0.8	0.8

PIN NO \ MODE	ICA02 MST001RS			ICA03 M6989			ICA04 KA8402		
	STOP	PLAY	REC	STOP	PLAY	REC	STOP	PLAY	REC
PIN 1	0.440.8Vpp	0.440.8Vpp	0.440.8Vpp	0	9	0	8	8	8
PIN 2	0.4	2	0.4	0	0	0	0	0	0
PIN 3	0	0	0	0	5	0	8	8	8
PIN 4	0	0	0	0	3.2	0	0	0	0
PIN 5	0	3	0	0	3.0	0	4	4	4
PIN 6	0	5	0	0	2	0	7.8	7.8	7.8
PIN 7	0	3.5	0	0	1.5	0	12	12	12
PIN 8	0	3.5	0	0	4.8	0			
PIN 9									

10-11. OSD (OPTION)



O S D

RPS : REVERSE SEARCH
J-RPS : JET REVERSE SEARCH
J-FPS : JET FORWARD SERACH

PIN NO \ MODE	IC901									
	STOP	FF	REW	PLAY	FPS	RPS	J-FPS	J-RPS	STILL	REC
PIN 1	+1.8V _ +4V									
PIN 2	+1.8V _ +2.8V									
PIN 3	2.8V									
PIN 4	-0.5V _ +4V					T=62usec				
PIN 5	+0.5V _ +4.6V					T=62usec				
PIN 6	+2.5V _ +5V									
PIN 7	+2V _ +4.4V									
PIN 8	0V									
PIN 9	0V _ +5V					T=20msec				
PIN 10	0V _ +5V					T=20msec				
PIN 11	+0.5V _ +2.8V					T=62usec				
PIN 12	2.2V									
PIN 13	4.8V									
PIN 14	0V									
PIN 15	5V									
PIN 16	0V _ +4.7V					T=62usec				

RPS : REVERSE SEARCH
J-RPS : JET REVERSE SEARCH
J-FPS : JET FORWARD SERACH

PIN NO \ MODE	IC902								
	STOP	PLAY	REC	REW	FWD	RPS	J-RPS	J-FPS	STILL
PIN 1	0V								
PIN 2	0V _ +5V								
PIN 3	5V								
PIN 4	-2.5V _ +7.2V					T=1.5usec			
PIN 5	0V _ +5V					T=1.5usec			
PIN 6	0V								
PIN 7	0V _ +5V					T=40msec			
PIN 8	0V _ +5V								
PIN 9	0V _ +5V								
PIN 10	5V								
PIN 11	0V								
PIN 12	0V _ +3V								
PIN 13	0V _ +2.8V								
PIN 14	1V								
PIN 15	3V								
PIN 16	0.8V								
PIN 17	1.2V								
PIN 18	5V								
PIN 19	0V								
PIN 20	0V								
PIN 21	0V _ +5V					T=20msec			
PIN 22	0V _ +5V					T=20msec			
PIN 23	0V _ +5V					T=20msec			
PIN 24	0V _ +5V					T=20msec			
PIN 25	0V _ +5V					T=20msec			
PIN 26	0V _ +5V					T=20msec			
PIN 27	0V _ +5V					T=62usec			
PIN 28	2.2V + 3.2V					T=62usec			
PIN 29	1.6V _ +2.2V					T=0.06usec			
PIN 30	0V _ +5V								
PIN 31	0V _ +5V								
PIN 32	5V								

NOTE
Do not use the part number shown on this drawing for ordering. The correct part number is shown in the parts list. And may be slightly different or amended since this drawing was prepared.

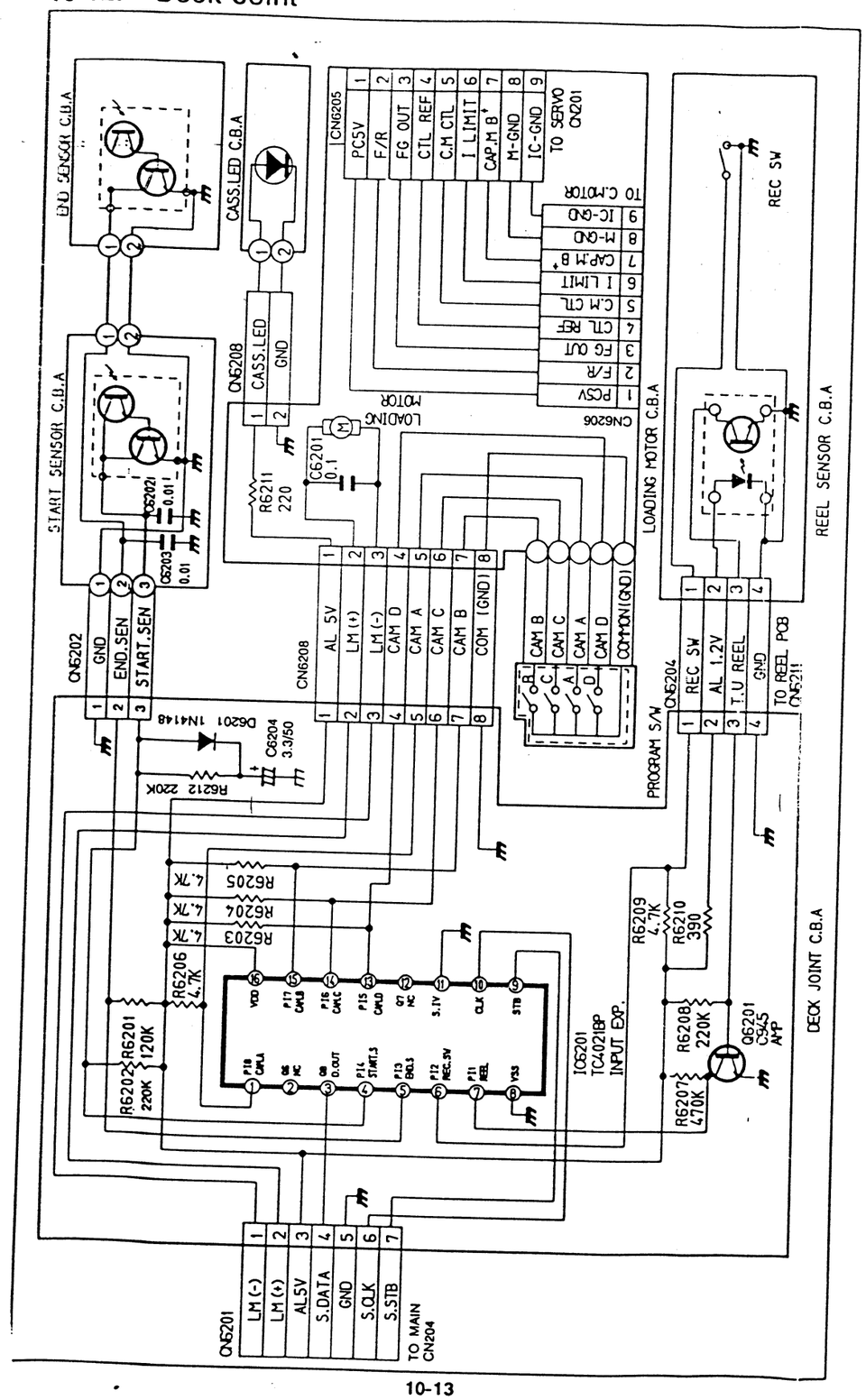
SPECIAL NOTE
All integrated circuits and many other semiconductor devices are electrostatically sensitive and therefore require the special handling techniques described under the "electrostatically sensitive (ES) devices" section of this service manual.

* ALL DIODE ARE 1N4148 (D901 - D905)

DECK JOINT

DECK JOINT

10-12. Deck Joint



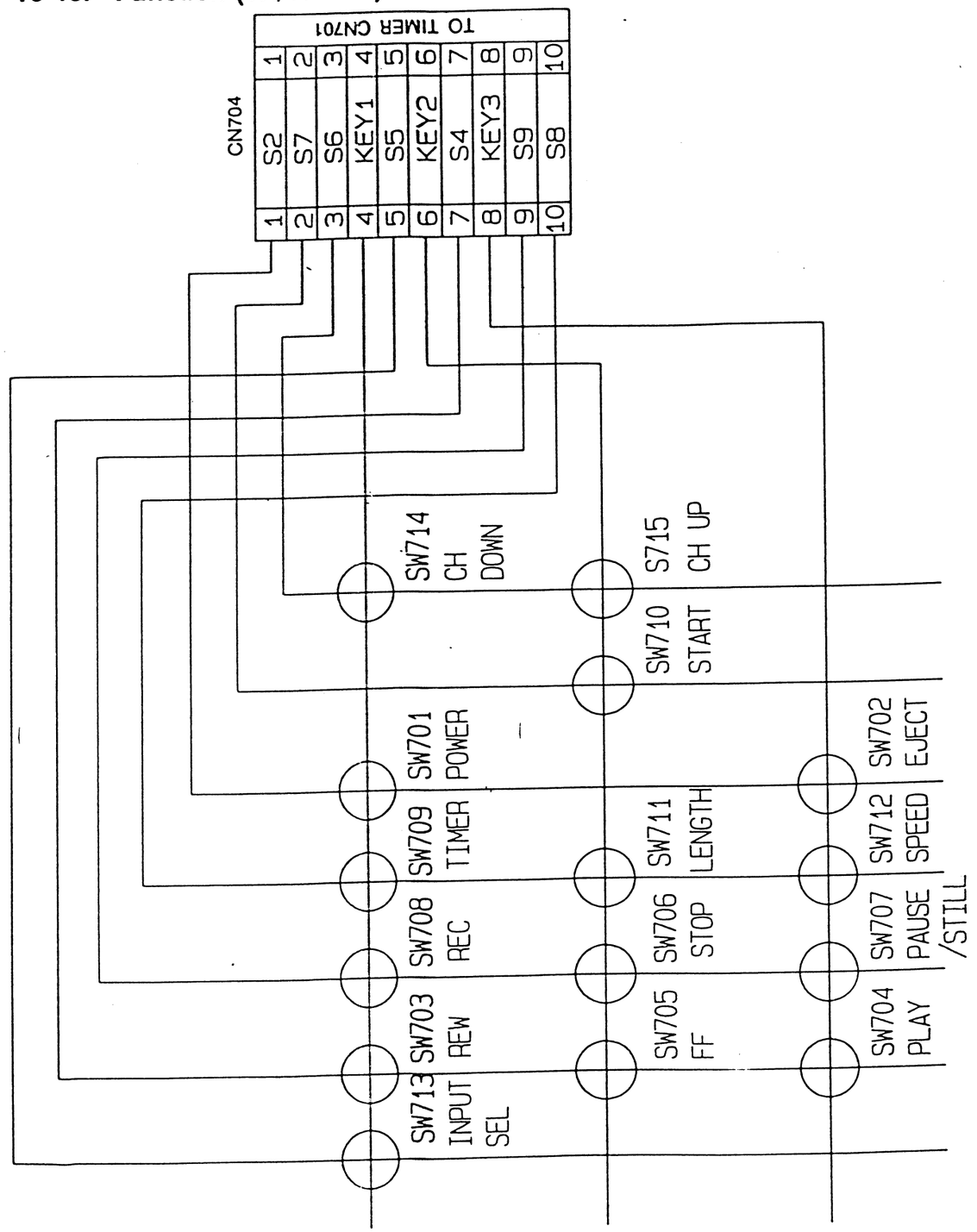
RPS : REVERSE SEARCH
J-RPS : JET REVERSE SEARCH
J-FPS : JET FORWARD SERACH

MODE / PIN NO	IC 6201 TC4021BP								
	STOP	PLAY	REC	REW	FWD	RPS	J-RPS	J-FPS	STILL
PIN 1	0	5	5	0	0	5	5	5	5
PIN 2	0	0	0	5	5	5	5	0	0
PIN 3	0	5	5	0	0	5	5	5	5
PIN 4	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8
PIN 5	5	4.8	4.8	4.8	5	4.8	4.8	4.8	4.8
PIN 6	5	5	5	5	5	5	5	5	5
PIN 7	0	0	0	2.6	2.6	2.2	2.2	2.2	0
PIN 8	0	0	0	0	0	0	0	0	0
PIN 9	5	5	5	5	5	5	5	5	5
PIN 10	3	3	3	3.2	3.2	2	2	.2	2
PIN 11	0	0	0	0	0	0	0	0	0
PIN 12	5	5	5	5	5	0	0	5	5
PIN 13	5	0	0	0	0	5	0	0	5
PIN 14	0	0	0	5	5	5	5	0	0
PIN 15	5	5	5	5	5	0	0	5	5
PIN 16	5	5	5	5	5	5	5	5	5

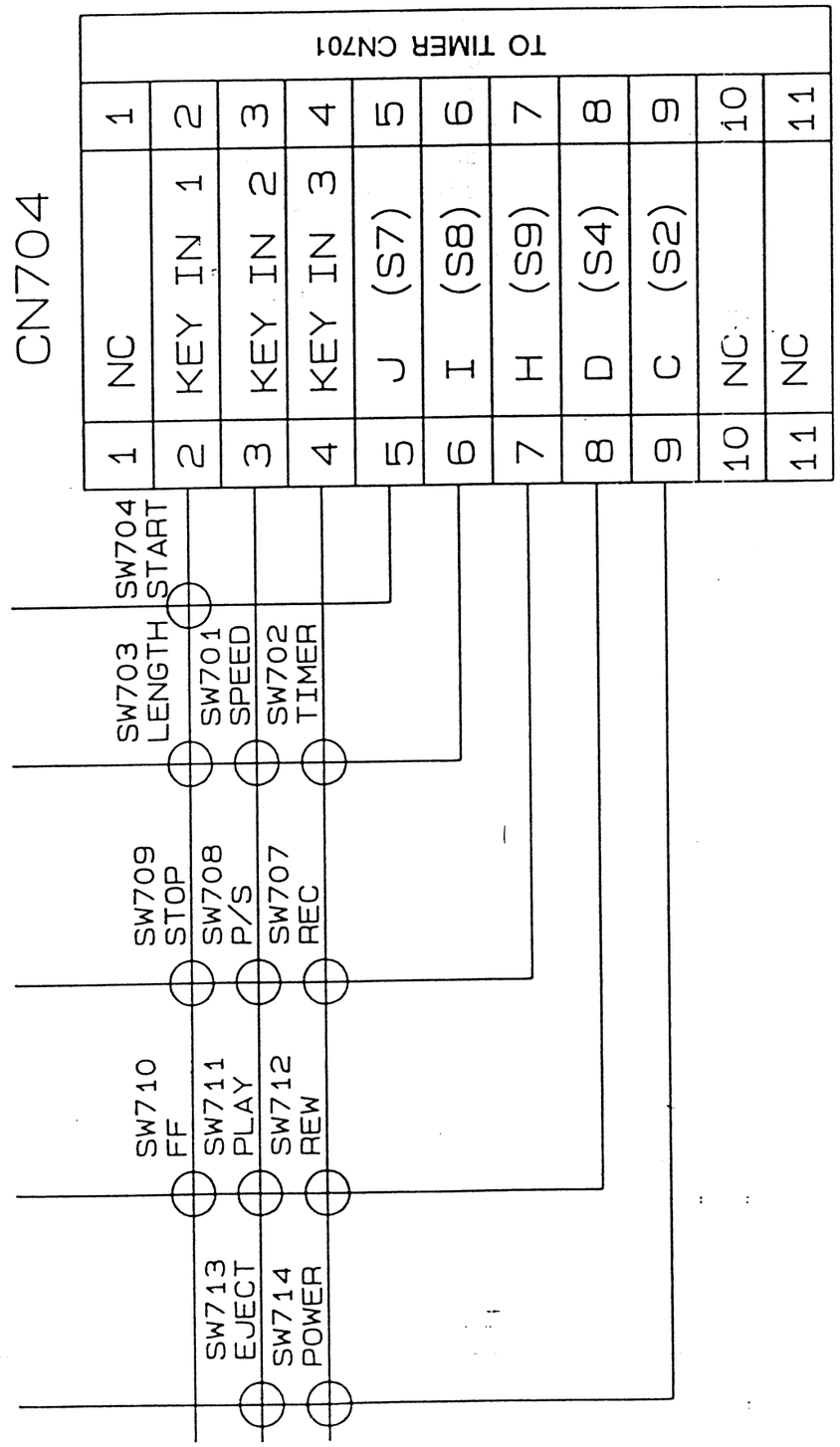
SPECIAL NOTE
All integrated circuits and many other semiconductor devices are electrostatically sensitive and therefore require the special handling techniques described under the "electrostatically sensitive (ES) devices" section of this service manual.

NOTE
Do not use the part number shown on this drawing for ordering. The correct part number is shown in the parts list. And may be slightly different or amended since this drawing was prepared.

10-13. Function (VX/VI-1560)

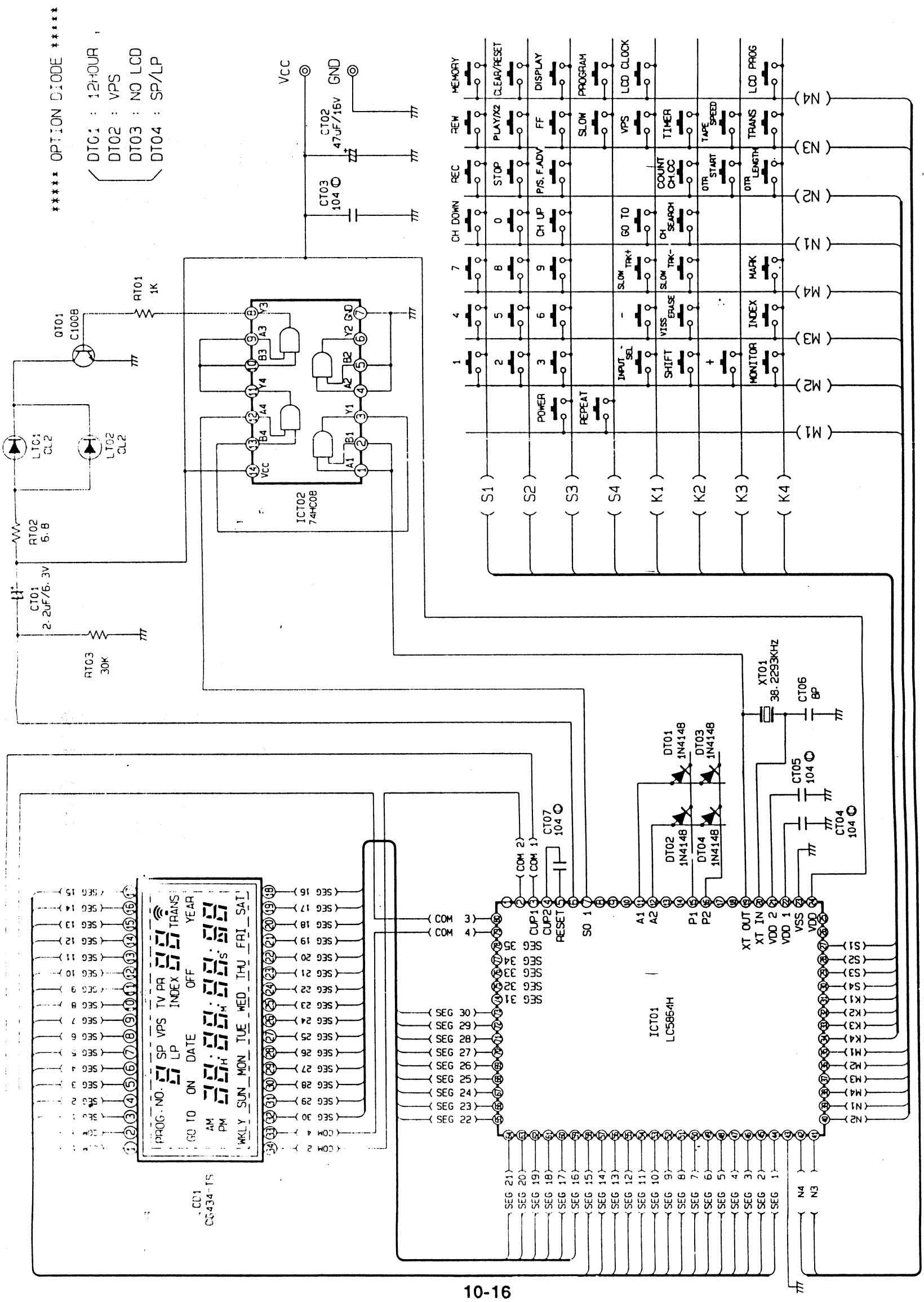


10-14. Function (VX-1561)


CN704
TO TIMER CN701
1 2 3 4 5 6 7 8 9 10 11
NC KEY IN 1 KEY IN 2 KEY IN 3 J (S7) I (S8) H (S9) D (S4) C (S2) NC NC
1 2 3 4 5 6 7 8 9 10 11
SW704 START
SW703 LENGTH
SW701 SPEED
SW702 TIMER
SW709 STOP
SW708 P/S
SW707 REC
SW710 FF
SW711 PLAY
SW712 REW
SW713 EJECT
SW714 POWER

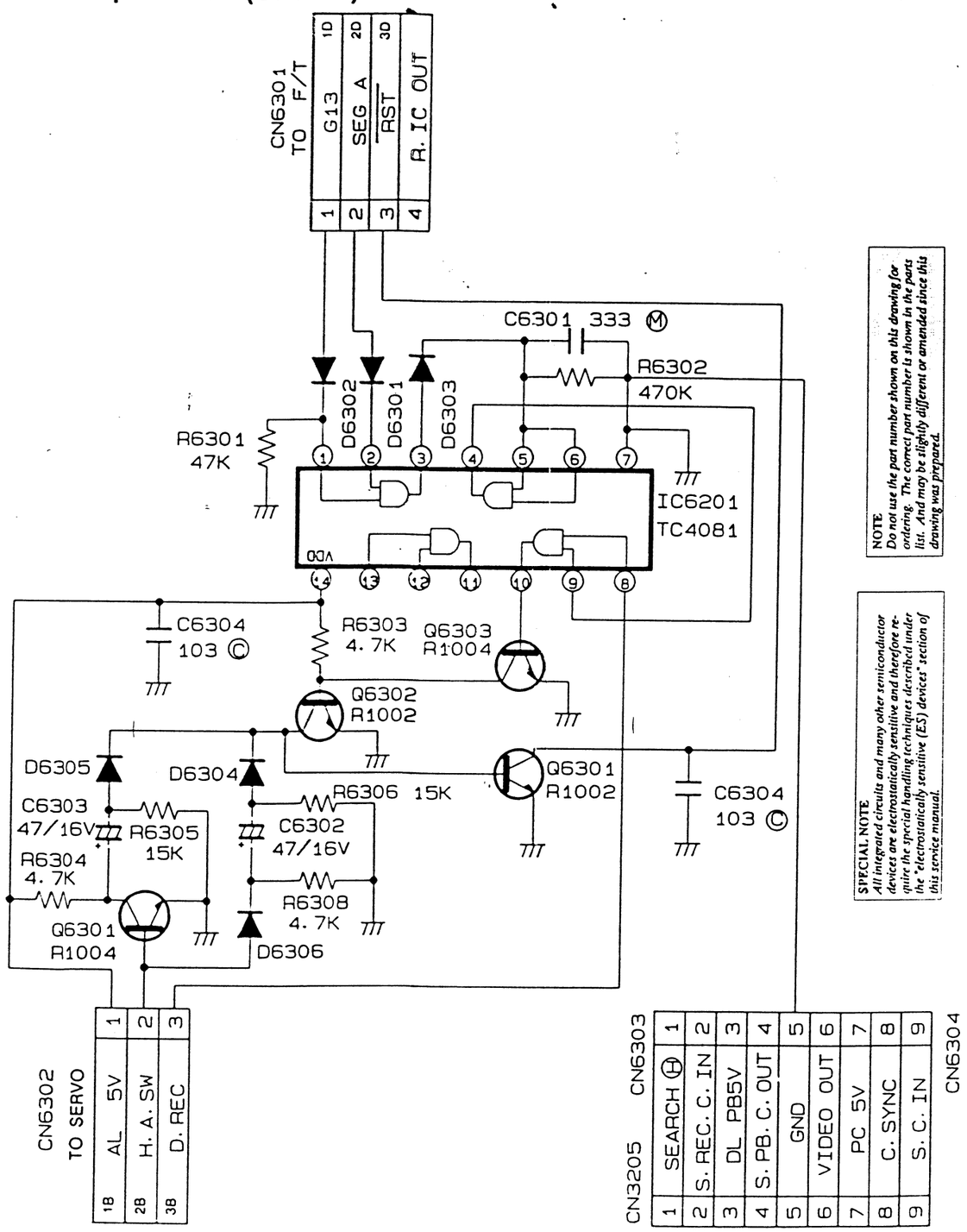
REMOTE CONTROL

10-16. Remote Control



SPEED SUB

10-15. Speed SUB (OPTION)



NOTE.
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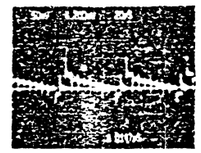
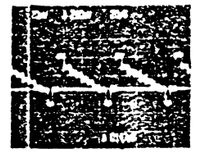
SPECIAL NOTE
All integrated circuits and many other semiconductor devices are electrostatically sensitive and therefore require the special handling techniques described under the "electrostatically sensitive (E.S) devices" section of this service manual.

MINANCE/
ROMINANCE

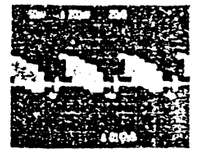
LUMINANCE/
CHROMINANCE



IC3201-2
WHITE/DARK 1.2Vp-p
REC

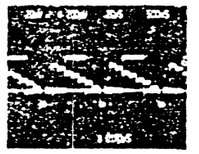


IC3201-6
0.55Vp-p
EE REC

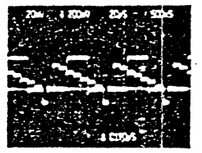


IC3201-7
1Vp-p
EE/REC

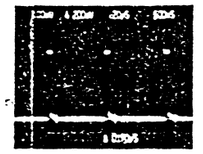
IC3201-7
PB DEMOD 2Vp-p
PB



IC3201-9
DE EMPH OUT 0.5Vp-p
REC

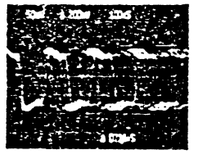


IC3201-10
PB D.O.C/0.5Vp-p
PB

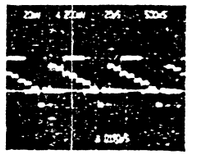


IC3201-17
C SYNC 3.5Vp-p
EE PB/REC

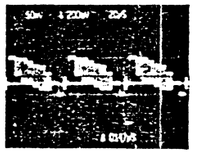
IC3201-19
PB MIX C IN/250mVp-p
PB



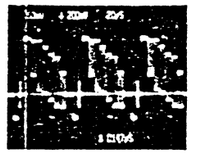
IC3201-30
REC FM, 1.5Vp-p
REC



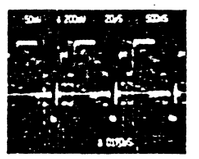
IC3202-6
VIDEO IN/0.5Vp-p
PB



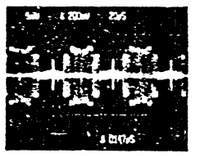
TP3201
VIDEO IN/1Vp-p
EE/REC



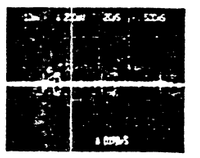
TP3202
VIDEO OUT/2Vp-p
EE



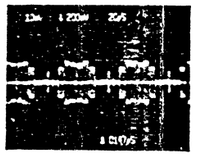
TP3202
PB Y OUT/2Vp-p
EE



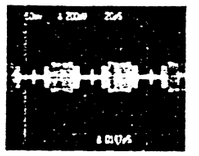
IC3401-3
EE C(4.43MHz)/170mVp-p
EE



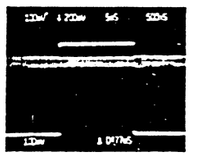
IC3401-3
PB C/250mVp-p
PB



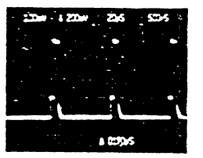
IC3401-7
630KHz/250mVp-p
EE



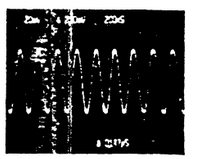
IC3401-9
EE C 0.8Vp-p
EE



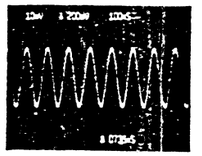
IC3401-9
PB ENV/800mVp-p
PB



IC3401-14
B.G.P/4Vp-p
EE PB/REC

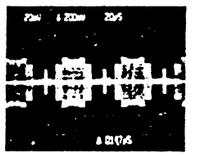


IC3401-16
321fh/500mVp-p
EE/PB/REC

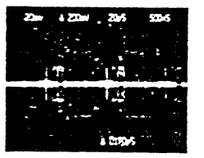


IC3401-17
2fsc(8.86MHz)/300mVp-p
EE/PB/REC

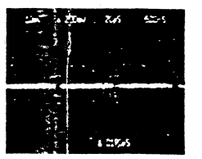
IC3401-21
C IN 800mVp-p
EE REC



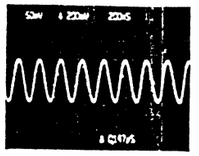
IC3401-23
500mVp-p
EE/REC



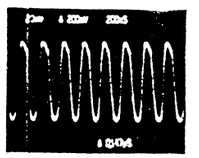
IC3401-23
PB C OUT/800mVp-p
PB



IC3401-24
PB C/250mVp-p
PB



Q3402-E
EE fsc(4.433619MHz)
EE



Q3402-E
PB fsc(4.433619MHz)
PB

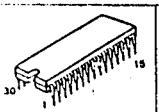
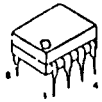
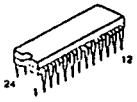
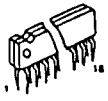
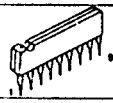
FIGURE	DESCRIPTION	LOCATION NO
VIDEO BOARD		
	LA 7323	IC 3201
	MSM7401RS	IC 3202
	LA 7331	IC 3401
	BA 7025L	IC 3402
	TA 7348P	IC 3501
	KSR 1002	Q 3201 Q 3202 Q 3216
	A 643	Q 3203 Q 3217
	KSR 2004 KSR 2001	Q 2206 Q 3215
	KSR 1004	Q 3414 Q 3416
	KSC 1008	Q 3501

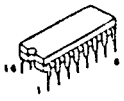
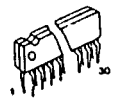
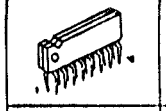
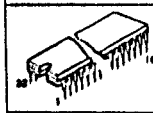
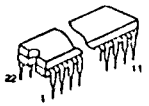
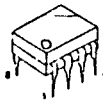
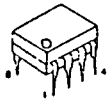
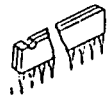
FIGURE	DESCRIPTION	LOCATION NO
TUNER BOARD		
	LA 7545	IC 401
AUDIO BOARD		
	LA 7295	IC 501
	KSC 1008	Q 503 Q 504 Q507
VPS BOARD (OPTION)		
	SAA 4700	IC 6101
OSD BOARD (OPTION)		
	NJM 2229S	IC 901
	M50554- 001SP	IC 902
	C 945	Q 901, Q 902 Q 903, Q 904
	A 733	Q 906
	ASR 1001	Q 905 Q 907

FIGURE	DESCRIPTION	LOCATION NO
LP SKEW BOARD		
	AN 3592K	IC 01
	MST 001RS	IC 02
	MSM 6989RS	IC 03
	KA 8402 (TA 7347P)	IC 04
	C 945	Q A02 Q A04 Q A10
	KSR 1004	Q A03 Q A05 Q A15 Q A20
	A 733	Q A09 Q A11
	KSR 2001	Q A14

11. SEMICONDUCTOR LEAD IDENTIFICATION

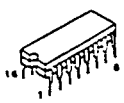
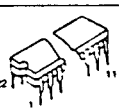
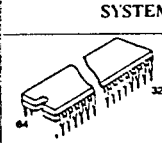
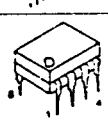
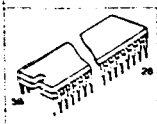
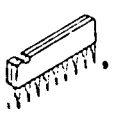
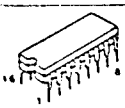
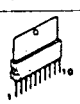
FIGURE	DESCRIPTION	LOCATION NO
DECK JOINT BOARD		
	TC 4021BP	IC 6201
	C 945	Q 6201
PRE-AMP BOARD		
	LA 7320	IC 3101
	A 733	Q 3101
	C 945	Q 3102 Q 3103 Q 3104
SYSTEM CONTROL / TIMER BOARD		
	UPD 759216 ACW-A75	IC 701
	KM 93C46	IC 702
	MN 1280-Q	IC 703
	C 945	Q 701,Q 702

FIGURE	DESCRIPTION	LOCATION NO
SERVO BOARD		
	HD 49748NT	IC 201
	LM 393	IC 202
	LM 358S	IC 203
	TC 4098BP	IC 204,IC 205
	KA 8301	IC 206
	KSR 1003 KSR 1004	Q 205, Q 213 Q 214
	A 733 C 945	Q 207, Q 210 Q 211 Q 209, Q 212
	KSA 928A	Q 215
	KSD 261	Q 216
	KSR 2003	Q 217